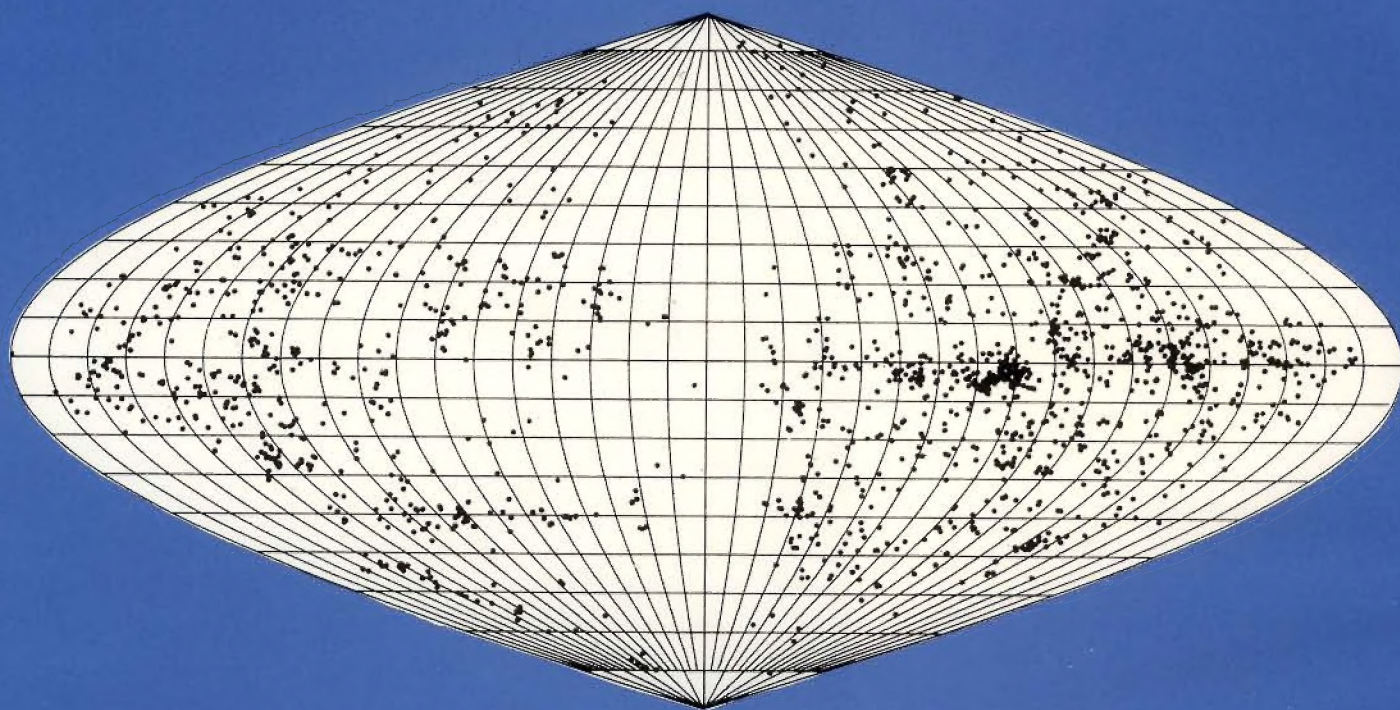


SECOND REFERENCE CATALOGUE OF BRIGHT GALAXIES



By Gerard de Vaucouleurs, Antoinette de Vaucouleurs,
and Harold G. Corwin, Jr.

Second Reference Catalogue of Bright Galaxies

Gerard de Vaucouleurs Antoinette de Vaucouleurs Harold G. Corwin, Jr.

Texas Press

Large catalogues of stars, nebulae, and galaxies play a basic role in astronomy. Collecting into a single volume a vast amount of observational material scattered through the world literature, they provide astronomers with the results of thousands of observations which most individual workers do not have the time or the resources to gather, sift, and analyze.

The original *Reference Catalogue of Bright Galaxies*, by Gerard de Vaucouleurs and Antoinette de Vaucouleurs, has been the recognized standard source of information on the brighter galaxies since its publication by the University of Texas Press in 1964.

The *Second Reference Catalogue*, prepared with the collaboration of Harold Corwin and supported by the National Science Foundation, is a supplement as well as a much enlarged, revised version of the original work. It provides some 200,000 information elements on 4,364 galaxies, mainly brighter than the 16th magnitude or larger than 0'5 in diameter and having redshifts generally less than $15,000 \text{ km s}^{-1}$. This is almost double the information content of the first catalogue. A special effort was made to include all the better-observed "peculiar" galaxies which have attracted attention in recent years, in particular many of the blue or emission-line objects, radio galaxies, compact objects (excluding quasars), dwarf galaxies, interacting systems, and galaxies in which supernovae have been observed. Large, obscured galaxies recently found near the galactic plane are also included.

All known corrections to the original catalogue and many new ones found during the revision were taken into account. More precise coordinates (equatorial, galactic, and supergalactic) and revised classifications are given for most entries. New elements, not given in the first catalogue, are included, especially nuclear luminosity classes, radio continuum fluxes and spectral indices, and 21-cm line emission data.

Apart from quantity of information, the major improvement of this second catalogue over the first is the more rigorous definition and greater precision of the diameters, magnitudes, colors, and radial velocity data. The book will be an up-to-date and much needed resource for astronomers and others engaged in extra-galactic research.

Gerard de Vaucouleurs is a professor of astronomy at the University of Texas. Antoinette de Vaucouleurs and Harold G. Corwin, Jr., are research associates in the University of Texas Department of Astronomy.

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**SECOND
REFERENCE CATALOGUE
OF BRIGHT GALAXIES**

The University of Texas
Monographs in Astronomy, No. 2

SECOND REFERENCE CATALOGUE OF BRIGHT GALAXIES

containing information on 4,364 galaxies
with references to papers published between 1964 and 1975

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INTRODUCTION

This revised and much enlarged version of the *Reference Catalogue of Bright Galaxies* (or "Bright Galaxy Catalog": BGC) was made necessary by the rapid growth of extragalactic astronomy since 1964. During the interval several important general catalogues of galaxies to fainter limits ($m \leq 15$) have been published. All are based on the Palomar Sky Survey plates (CGCG: Zwicky *et al.* 1960–1968) or paper prints (MCG: Vorontsov-Velyaminov *et al.* 1962–1968, 1974; UGC: Nilson 1973, 1974) as is a revised version of the NGC for objects of all types (RNGC: Sulentic and Tifft 1973). Corresponding catalogues of the southern hemisphere from the ESO and UK Schmidt surveys should follow in the next few years. Until then the exploration unbalance between the two hemispheres remains severe, especially at declinations $\delta < -30^\circ$, and statistical users of this catalogue should be aware of this fact. They should also note that the present catalogue is not intended to be complete to any specified limiting magnitude, diameter, or redshift. It is merely a compilation of data reduced to uniform systems for those galaxies which have been the object of some individual study (beyond mere inclusion in a catalogue) and which are neither much smaller than $0'.5$ in diameter, or fainter than 16th magnitude or have redshifts in excess of $15,000 \text{ km s}^{-1}$. A special effort was made to include all the so-called peculiar galaxies which for one reason or another have attracted attention in recent years, in particular many of the blue or emission-line galaxies, radio galaxies, compact objects, dwarf galaxies, interacting systems, and galaxies in which supernovae have been observed, provided always that at least *one* piece of significant information be known for the object. All galaxies listed as larger than $1'$ (inner diameter) by Vorontsov-Velyaminov or brighter than $m \cong 13$ by Zwicky were examined for possible inclusion, as were all galaxies tentatively identified with radio sources; most of the compact objects catalogued by Zwicky (1971) could not pass the diameter or magnitude rejection rule but were nevertheless included when a small redshift was indicated. Large, obscured galaxies recently found near the galactic plane were also included. All known corrections to the original BGC (G. and A. de Vaucouleurs 1966, 1972; Corwin 1972) were taken into account and many additional corrections were made in the course of this revision. In particular, precise celestial coordinates of galaxy centers (Glanfield and Cameron 1967; Gallouët *et al.* 1971, 1973, 1975) were used whenever possible and radio continuum fluxes, spectral indices, and 21 cm line emission data are listed for several hundred galaxies whereas none was given in the BGC. The total number of entries in this *Second Reference Catalogue of Bright Galaxies* ("Revised Bright Galaxy Catalogue": RBGC) is 4364, nearly double that in the original catalogue. To avoid unnecessary duplication, the individual descriptions and bibliography given in the notes to the present catalogue do not repeat those already given in the BGC unless to correct errors or omissions. Except for the alphanumeric tabular data, the present catalogue should be considered as a companion volume to the original catalogue, not as a complete substitute.

Apart from the quantity of information, the major improvement of the RBGC over the original BGC is in the more rigorous definitions and greater precision of the diameters, magnitudes, and radial velocity data. Photometric diameters and axial ratios refer to a statistically well-defined surface brightness level ($25.0 \text{ mag arcsec}^{-1}$ in the B system), and for the first time metric (effective) diameters are derived for several hundred galaxies. Total (asymptotic) magnitudes and color indices are now available for some 1500 galaxies from precise UBV photometry and the old, but still useful, Harvard magnitudes of the original Shapley-Ames survey (1932) have been reduced to the new system. Considerable efforts were devoted to the definition of error-free radial velocity systems independently for optical and radio (21 cm) data; both systems agree within $\pm 10 \text{ km s}^{-1}$ at all redshifts. Mean weighted velocities are presented for nearly 950 multiply observed galaxies and velocities in the same system for more than 1800 singly observed objects.

As the original BGC the present catalogue consists of two main parts:

1. The Catalogue proper includes all coordinate, classification, diameter, magnitude, color, radial velocity, and radio data, presentable in tabular form. Sources and references are tabulated separately in several appendices. With a few exceptions (e.g., to avoid separating members of close pairs) objects are listed in order of increasing 1950 right ascension without segregating NGC, IC, or A (anonymous) numbers as was done in the original BGC.
2. The Notes include all significant references (monographs, photographs, surface photometry, magnitudes and colors, spectroscopy, spectrophotometry, star counts, rotation and mass, clusters, HII regions, HI and continuum radio emission, IR, UV and X-ray emission, supernovae, etc.) published since January 1, 1964 (unless overlooked in BGC), and received prior to July 1, 1975. Some important lists of redshifts and radio data received in preprint form before the same date were also included. Descriptions etc. already given in the BGC are not repeated, unless in need of revisions or corrections.

Several Appendices give detailed references to sources of magnitudes, color indices, radio continuum, and 21 cm line data. Finding lists and cross identifications are provided for some specialized catalogue numbers, including IC objects, Vorontsov-Velyaminov's interacting galaxies, Markarians's blue objects, Arp's peculiar galaxies, for the parent galaxies of bright supernovae and for radio source numbers associated with galaxies.

Section 2 gives a brief description of the information given in each column of the catalogue; section 3 gives a more detailed explanation of the sources of the material and of the methods of reduction to homogeneous systems; section 4 gives explanation of the notes and appendices to the catalogue.

2. THE CATALOGUE

The data for each galaxy occupy two lines of two pages face to face. The entries on the left page are as follows:

Column 1: line 1, NGC identification (N), IC identification (I) where available, or A (for anonymous) followed by the first 4 digits (hours and minutes) of the 1950 right ascension,

the sign and first 2 digits (degrees) of the 1950 declination, as recommended by IAU Commission 28 (1973). However, anonymous objects close to NGC or IC objects and previously designated by the same numbers followed by A, B, C, etc. have been retained. Numbers followed by a period indicate double or multiple objects. Listed data then refer to the combined objects, e.g., total magnitude of a pair, except that the classifications refer to the brightest component.

line 2, other identifications (MK, D) in Markarian's lists of blue galaxies or van den Bergh's DDO catalogue of dwarf galaxies (see sect. 3.0).

Column 2: line 1, RA = right ascension (1950) to 0.1 min (or 0.01 min for precise positions; see sect. 3.1, a).

line 2, 100 P = precession (2000) in right ascension to 0.01 min for 100 years.

Column 3: line 1, Dec = declination (1950) to 1' (or 0'.1 for precise positions).

line 2, 100 P = precession (2000) in declination to 0'.1 for 100 years.

Column 4: line 1, L = new galactic longitude in IAU 1958 system (formerly L^{II}).

line 2, B = new galactic latitude (formerly B^{II}); both L and B to 0°01.

Column 5: line 1, SGL = new supergalactic longitude (see section 3.1, c).

line 2, SGB = supergalactic latitude; both SGL and SGB to 0°1.

Column 6: line 1, Revised morphological type in *Handbuch der Physik* system (de Vaucouleurs 1959, 1963, 1974) (for illustration see BGC frontispiece) and additional types in the same system (Corwin 1968, 1970; Nilson 1973, 1974), followed by T = numerical index of stage along Hubble sequence (de Vaucouleurs 1974), coded as explained in sect. (3.2, a).

line 2, DDO (T,L) = morphological type and luminosity class L in David Dunlap Observatory (DDO) system (see sect. 3.2, b), coded as explained in Table 3.

Column 7: line 1, source (S) of plate material and author (A) of classification (see sect. 3.2, a).

line 2, weight W of classification on a scale from ~ 1 to 5, calculated as explained in sect. (3.2, a).

Column 8: line 1, Y1 = type and color class in Yerkes list 1 (Morgan 1958).

line 2, Y2 = type and color class in Yerkes list 2 (Morgan 1959), both coded as explained in sect. (3.2, c).

The Hubble-Sandage types and Hubble-Holmberg types (sec. 3.2d) are listed in Appendix T.

Column 9: line 1, BYUN = nuclear types in Byurakan system (Tovmassian 1965-67) on numerical scale from 1 to 5 as explained in sect. 3.2, e and Table 5.

line 2, BGCN = nuclear class from description in BGC Notes, coded as explained in sect. 3.2, e and Table 5.

Column 10: line 1, $\log D_{2.5}$ = decimal logarithm of apparent major *isophotal* diameter measured at or reduced to surface brightness level $\mu_B = 25.0 \text{ mag sec}^{-2}$, as explained in sect. (3.3, a). Unit of D is 0'.1 to avoid negative entries.

line 2, m.e. = mean error (in .001 units) of $\log D_{2.5}$, computed as explained in sect. (3.3, b).

Column 11: line 1, $\log R_{2.5}$ = decimal logarithm of ratio of major diameter $D_{2.5}$ to minor diameter $d_{2.5}$ measured at or reduced to surface brightness level $\mu_B = 25.0 \text{ mag sec}^{-2}$, as explained in sect. (3.3, c).

Column 12: line 1, $\log D(0)_{2.5}$ = decimal logarithm of isophotal major diameter (in 0'.1)

statistically corrected to “face-on” ($i = 0^\circ$) by the relation

$$\log D(0)_{25} = \log D_{25} - 0.235 \log R_{25},$$

following the precepts of H² V (Heidmann *et al.* 1971), revised as explained in sect. (3.3,d).

line 2, $\log D_0 = \log D(0)_{25}$ statistically corrected for galactic extinction to $A_B = 0$ by the relation

$$\log D_0 = \log D(0)_{25} + (0.12 - 0.007T)A_B$$

following the precepts of H² V (1971), revised as explained in sect. (3.3,e).

Column 13: line 1, $\log A_e$ = decimal logarithm of the apparent diameter (in 0'.1) of the “effective aperture,” being the smallest *circle* (generally centered at nucleus) within which half the total B-band flux is emitted, derived as explained in sect. (3.3,f).

line 2, m.e. = mean error of $\log A_e$ (in 0.01), estimated as explained in sect. (3.3,f).

The entries on the right page are:

Column 14: line 1, repeats NGC, IC, or A identification.

line 2, other identifications (Z, V) in Zwicky’s lists and 1971 *Catalogue of Selected Compact Galaxies* or in Vorontsov-Velyaminov’s 1959 *Atlas and Catalogue of Interacting Galaxies* (Arp Atlas numbers are in Appendix F1 and in the Notes).

Column 15: line 1, m_H = Harvard photographic apparent magnitude from HA88, 2; this entry identifies objects listed in the original Shapley-Ames Catalogue (see 3.4,a). Uncertain entries are noted (*).

line 2, m_c = Harvard photographic magnitude statistically corrected to the B_T system as specified in section 3.4,b. The average mean error of m_c is $\sigma(m_c) = 0.22$ mag. varying slightly with magnitude, diameter, and axis ratio (de Vaucouleurs 1956), except for the uncertain (*) values which have half weight ($\sigma = 0.35$ mag.).

Column 16: line 1, B_T = total (or asymptotic) magnitude in the B system derived by extrapolation from photoelectric magnitude-aperture data $B_T(A)$ or from precise photographic surface photometry with photoelectric zero point $B_T(S)$, as explained in sect. (3.4,c).

line 2, m.e. = estimated mean error of B_T computed as explained in sect. (3.4,c).

Column 17: line 1, m'_e = mean B surface brightness in magnitude per square minute of arc within the effective aperture A_e , as given by the relation

$$m'_e = B_T + 0.75 + 5 \log A_e - 5.26.$$

m'_e is statistically related the the effective mean surface brightness μ'_e (de Vaucouleurs 1962) with which it coincides when $\log R = 0$ ($i = 0^\circ$) (see sect. 3.4,d).

line 2, m'_{25} = mean B surface brightness in magnitude per square minute of arc within the standard isophote ($\mu_B = 25$), as given by the relation

$$m'_{25} = m_{25} + 5 \log D_{25} - 2.5 \log R_{25} - 5.26$$

where m_{25} = integrated magnitude within the standard isophote is statistically derived from the total magnitude B_T (or m_c) by the relation $m_{25} \cong B_T + \Delta m_{25}$, with $\Delta m_{25} = 0.25$ for ellipticals ($T \leq -4$), 0.13 for lenticulars ($-3 \leq T \leq -1$) and 0.11 for spirals and irregulars ($T \geq 0$), as explained in sect. (3.4,d).

Column 18: line 1, A_B = galactic extinction in B system calculated by the relations

$$\begin{aligned} A_B &= 0.19 [1 + S_N(\ell) \cdot \cos b] \cdot |C| & (b > 0) \\ A_B &= 0.21 [1 + S_S(\ell) \cdot \cos b] \cdot |C| & (b < 0) \end{aligned}$$

following the principles of de Vaucouleurs and Malik (1969) but revised to include better estimates of the polar extinction coefficients A_N , A_S and of the longitude dependent terms S_N , S_S , as explained in sect. (3.4,e).

line 2, B_T^0 = total "face-on" magnitude corrected for galactic and internal absorption and for redshift by the relation

$$B_T^0 = B_T(A_B=0, i=0, z=0) = B_T - A_B - A_0(i) - K_B z$$

where A_B is from line 1. The internal differential absorption between i and $i = 0^\circ$ (face-on) is given by $A_0(i) \cong A'(T) \log R_{2.5}$

with $A'(T) =$

0.0	0.2	0.4	0.6	0.7	0.8	0.9	1.0
≤ -4	-3	-2	-1	0	1 to 8	9	10

for T

following the precepts of Heidmann, Heidmann, and de Vaucouleurs (H^2V , 1971), adapted to permit using $\log R_{2.5}$ as a statistical measure of inclination i , as explained in sect. (3.4,c).

$K_B z$ is the K correction for redshift given by

$$K_B z = K' cz \quad (z \leq 0.04)$$

with $K'_B = 1.5 \cdot 10^{-5}$ for $T \leq 0$, $(1.5 - 0.025T) \cdot 10^{-5}$ for $0 \leq T \leq 3$, and $(0.75 - 0.01T) \cdot 10^{-5}$ for $T \geq 3$, after Wells (1972) and Pence (1976), as specified in sect. (3.4,e).

Column 19: line 1, $(B-V)_T$ = total (asymptotic) color index in the standard B-V system derived by extrapolation from photoelectric color-aperture data or from precise photographic surface photometry with photoelectric zero point, as explained in sect. (3.5,a).

line 2, m.e. = mean error of $(B-V)_T$, estimated as explained in sect. (3.5,a).

Column 20: line 1, $(U-B)_T$ = total (asymptotic) color index in the standard U-B system derived by extrapolation from photoelectric color-aperture data, as explained in sect. (3.5,a).

line 2, m.e. = mean error of $(U-B)_T$, estimated as explained in sect. (3.5,a).

Column 21: line 1, $(B-V)(A_e)$ = mean B-V color index within effective aperture A_e (i.e., integrated color index within circle including half total B flux) derived by interpolation from photoelectric color-aperture data, as explained in sect. (3.5,b). This quantity is closely related to the effective mean color index $[B-V]_e$ (i.e., integrated color index within isophote enclosing half total B flux) derived from precise photographic surface photometry and with which it coincides when $\log R = 0$ ($i = 0^\circ$).

line 2, m.e. = mean error of $(B-V)(A_e)$, estimated as explained in sect. (3.5,b).

Column 22: line 1, $(U-B)(A_e)$ = mean U-B color index within effective aperture A_e , derived as explained in sect. (3.5,b).

line 2, m.e. = mean error of $(U-B)(A_e)$, estimated as explained in sect. (3.5,b).

Column 23: line 1, $(B-V)_T^0$ = total B-V color index corrected for galactic and internal absorption and for redshift by the relation

$$(B-V)_T^0 = (B-V)_T(A_B=0, i=0, z=0) = (B-V)_T - E(B-V) - E_{B-V}(i) - K_{B-V} z,$$

where $E(B-V) = A_B/(R+1)$ and $E_{B-V}(i) = A_0(i)/(R+1) \cong [A'/(R+1)] \log R_{2.5}$, with $R = A_V/E(B-V)$, following the precepts of H^2V (1971), adapted to permit using $\log R_{2.5}$, as explained in sect. (3.4,e). $K_{B-V} z$ is the differential K correction on B-V for the redshift effect given by

$$K_{B-V} z = K'_{B-V} \cdot cz \quad (z < 0.04)$$

with $K'_{B-V} = 9.5 \cdot 10^{-6}$ for $T < 0$, $(9.5 - 1.0T) \cdot 10^{-6}$ for $0 \leq T \leq 3$, and $6.5 \cdot 10^{-6}$ for $T \geq 3$, after Wells (1972) and Pence (1976), as specified in sect. (3.5,c).

line 2, $(U-B)_T^0$ = total U-B color index corrected for galactic and internal absorption and for redshift by the relation

$$(U-B)_T^0 = (U-B)_T (A_B=0, i=0, z=0) = (U-B)_T - XE(B-V) - E_{U-B}(i) - K_{U-B}z$$

where $X = 0.72$ for $(B-V)_0 \leq 0.60$
and $X = (B-V)_0 + 0.12$ for $(B-V)_0 \geq 0.60$
with $(B-V)_0 = (B-V)_T - A_B/(R+1)$ (i.e., not corrected to “face-on”), following the precepts of Racine (1973), adapted to the case of galaxies, as explained in sect. (3.5,c). Similarly, the internal reddening $E_{U-B}(i)$ is calculated by

$$E_{U-B}(i) = XE_{B-V}(i) = XA_0(i)/(R+1) \cong X[A'/(R+1)] \log R_{25}$$

with the same values of X.

$K_{U-B}z$ is the differential K correction on U-B for the redshift effect given by

$$K_{U-B}z = K'_{U-B} \cdot cz \quad (z < 0.05)$$

with $K'_{U-B} = -5.5 \cdot 10^{-6}$ for $T \leq 0$, $(-5.5 + 3.3T) \cdot 10^{-6}$ for $0 \leq T \leq 3$, and $+4.5 \cdot 10^{-6}$, for $T \geq 3$, after Wells (1972) and Pence (1976), as specified in sect. (3.5,c).

Column 24: line 1, $\log S_R$ = decimal logarithm of radio continuum flux density at or near standard frequency $\nu_R = 1400$ MHz in 0.01 Jansky units ($=10^{-28} \text{ Wm}^{-2} \text{ Hz}^{-1}$), derived as explained in sect. (3.6,a).

line 2, $N_- N_R N_+$ = number of radio continuum observations available at $\nu < \nu_R$, ν_R and $\nu > \nu_R$ and used to derive α_- , S_R and α_+ , as specified in sect. (3.6,a and b).

Column 25: line 1, α_- = mean logarithmic spectral index $\langle \partial \log S / \partial \log \nu \rangle$ at frequencies $\nu \leq \nu_R$ (for normal spectra, see Notes for exceptions), derived as explained in sect. (3.6,b).

line 2, α_+ = mean logarithmic spectral index $\langle \partial \log S / \partial \log \nu \rangle$, at frequencies $\nu \geq \nu_R$ (for normal spectra, see Notes for exceptions), derived as explained in sect. (3.6,b).

Column 26: line 1, $\log S_H$ = decimal logarithm of integrated flux density in HI 21 cm emission line expressed in units of 10^{-28} Wm^{-2} (to express in conventional units of $10^{-6} \mathfrak{M}_\odot \text{ Mpc}^{-2}$ multiply by 0.497, i.e. $\log F_H = \log S_H - 0.304$).

line 2, N_H = number of 21 cm emission line integrated flux observations used to derive S_H . $A_{21} = 21$ cm self-absorption (sect. 3.7,b).

Column 27: line 1, RI = radio index being the difference $m_R^\circ - B_T^\circ$ between the radio continuum magnitude defined by

$$m_R = 11.6 - 2.5 \log S_R,$$

after Hanbury Brown and Hazard (1961), corrected for redshift as explained in sect. 3.6,c and the corrected total B magnitude B_T° .

line 2, HI = neutral hydrogen index being the difference $m_{21}^\circ - B_T^\circ$, between the corrected (face-on) 21 cm emission line magnitude defined by $m_{21}^\circ = 16.6 - 2.5 \log S_H^\circ$, where $\log S_H^\circ = \log S_H + A_{21}$, is the measured flux density (col. 26) corrected to $i = 0^\circ$ for 21 cm self-absorption A_{21} , following the precepts of H²V (1971), as explained in sect. (3.7,b).

Column 28: line 1, V = cz observed “radial velocity” in km s^{-1} , being the weighted mean of all optical and radio observations, corrected for systematic errors, as explained in sect. (3.8,a,b).

line 2, N_R, N_o = number of radio (N_R) and optical (N_o) measurements of radial velocity used in derivation of weighted mean V, and m.e. of V (in km s^{-1}) derived as explained in sect. (3.8,c).

Column 29: line 1, V_0 = radial velocity corrected for solar motion with respect to the velocity centroid of the Local Group of galaxies given by

$$V_0 = V + \Delta V = V + 300 \cos A,$$

where A is the angular distance to the conventional solar apex redefined as $L^{\text{II}} = 90^\circ$, $B^{\text{II}} = 0^\circ$, following the precepts of Humason and Wahlquist (1955), but revised for consistency with new galactic coordinates, following Sandage and Tammann (1975), as explained in sect. (3.8,d), and proposed to IAU Commission 28 (1976).

line 2, $\Delta V = 300 \cos A = 300 \sin L \cos B$, the solar motion correction (in km s^{-1}) is listed for all galaxies even if no velocity is available yet.

Column 30: line 1, refers to additional information in Appendices P (photographs), S (supernovae), or T (Hubble-Sandage and Hubble-Holmberg types). Appendices A, F, and I, which are finding lists of anonymous, peculiar, or IC objects, need not be called. Appendices H (HI flux), M (magnitudes and colors), R (radio continuum), and V (velocities), which give sources of information in columns 26, 16-23, 24-25, and 28 respectively, are not called either.

3. EXPLANATION OF SOURCES AND REDUCTION OF DATA TO STANDARD SYSTEMS

This section gives more detailed information on the catalogue entries which are not self-explanatory.

3.0 *Identifications* (Columns 1, 14, lines 1, 2)

In addition to NGC (N), IC (I), and anonymous (A) numbers (line 1) alternative identifications are given (line 2) from Markarian's lists of blue objects (1967-74)—designated MKxxx, from van den Bergh's (1959, 1966) catalogue of DDO dwarfs—denoted Dxxx, from Zwicky's seven lists of compact galaxies (1961-1968, 1971)—designated 1Zxxx to 7Zxxx (in lieu of IZwxxx to VII Zwxxx)—or ZCG without number when listed only in his *Catalogue of Selected Compact Galaxies* (1971). Objects in Vorontsov-Velyaminov's *Atlas and Catalogue of Interacting Galaxies* (1959) are designated Vxxx. Objects in Arp's *Atlas of Peculiar Galaxies* (1966) are listed in Appendix F1 and in the Notes. Identifications of A objects with numbers in Vorontsov-Velyaminov's *Morphologicheskii Katalog Galaktik* (MCG) and/or in Nilson's *Uppsala General Catalogue of Galaxies* (UGC) are listed in Appendix A, together with the A designation of the original BGC.

In the confused field of NGC 4341-43 (see BGC, p. 18, Fig. 8) we have now adopted the revised identifications proposed by Herzog (1967) and Zwicky (CGCG, III, 391); that is, N4341 is now IC3260 and N4342 is IC3256.

3.1. *Coordinates*

a) Equatorial coordinates RA, Dec (Columns 2, 3, line 1) for the 1950 equinox are given to 0.01 min and 0'.1 (case A) when precise positions are available (Glanfield and Cameron 1967; Cameron 1970; Gallouët *et al.* 1971, 1973, 1975; Peterson 1973; Holmberg *et al.* 1974; Sandage 1975; Fisher and Tully 1975; or from various lists of optical identifications of radio sources or remeasured on Palomar Sky Survey—PSS—prints). Coordinates are given

to 0.1 min and 1' (case B) when taken from GCGC, UGC, or MCG (in order of preference), or south of -35° from BGC (case C). The corresponding mean errors are of the order of 0'.05 to 0'.1 (A), 0'.5 to 1' (B), and 1' to 2' (C). All previous corrections in Lists I, II, and III (G. and A. de Vaucouleurs 1966, 1972; Corwin 1972) were taken into account.

b) Galactic coordinates L, B (Column 4, lines 1, 2) are given to $0^\circ.01$, exclusively in the "new" system (formerly L^{II} , B^{II}) adopted by the IAU in 1958. Conversion to the old system (L^I , B^I) may be made through the Lund Observatory Tables (1961).

c) Supergalactic coordinates SGL, SGB (Column 5, lines 1, 2), given to $0^\circ.1$, are in a slightly revised system with the same north pole at $L^{II} = 47^\circ.37$, $B^{II} = +6^\circ.32$ ($L^I = 15^\circ$, $B^I = +5^\circ$), but with the origin of SGL at $L^{II} = 137^\circ.29$, $B^{II} = 0^\circ$ (instead of $L^I = 105^\circ$, $B^I = 0^\circ$) to conform with the new galactic equator. The revised SGL is about $0^\circ.7$ greater than the old one. The distribution maps in Figures 1 to 4 are equal area projections of the sphere in supergalactic coordinates. On these maps the Milky Way and zone of avoidance are along the periphery and vertically across the center of the chart; the northern galactic hemisphere is to the right of the central meridian. The Virgo cluster concentration is in evidence near $SGL = 104^\circ$, $SGB = -2^\circ$.

3.2. Classifications

a) Revised morphological types (Columns 6, 7, line 1) are given in the coded version of the *Handbuch der Physik* system (de Vaucouleurs 1959, 1963) as explained in the BGC (p. 3) and from the same original sources, except for revisions, and with additions (in the same system) from the following sources (Corwin 1968, 1970, and unpublished; Nilson 1973, 1974). The source code indicates the origin of the best plate (or in some cases paper print) from which the revised type was established and the author of classification as shown in Tables 1a,b.

Table 1a. Sources of Revised Types: Telescopes[†]

Observatory	Tel. Ap. (in.)	Code	Observatory	Tel. Ap. (in.)	Code
Palomar	200	P200 .	Mt. Wilson	60	W060 .
Lick	120	L120 .	Tautenburg	52	T052 .
Mt. Wilson	100	W100 .	Palomar (prints)	48	P048 .
McDonald	82	M082 .	Palomar (glass)	48	PG48 .
Radcliffe	74	R074 .	ESO	40	E040 .
Mt. Stromlo	74	S074 .	Siding Spring	40	S040 .
USNO (Flagstaff)	61	N061 .	Lick	36	L036 .
Boyden	60	B060 .	Mt. Stromlo	30	S030 .
Córdoba	60	C060 .			

[†] Types from sources H030 (Helwan 30") and R020 (I. Roberts 20") in BGC have all been replaced by types from other sources.

Table 1b. Sources of Revised Types: Authors

Author	Ref.	Code
Buta	(1)	.... B
Corwin	(2)	.... C
Fisher and Tully	(3)	.... F
Holmberg <i>et al.</i>	(4)	.... H
Nilson	(5)	.... N
Rood and Baum	(6)	.... R
de Vaucouleurs	(7)	.... V

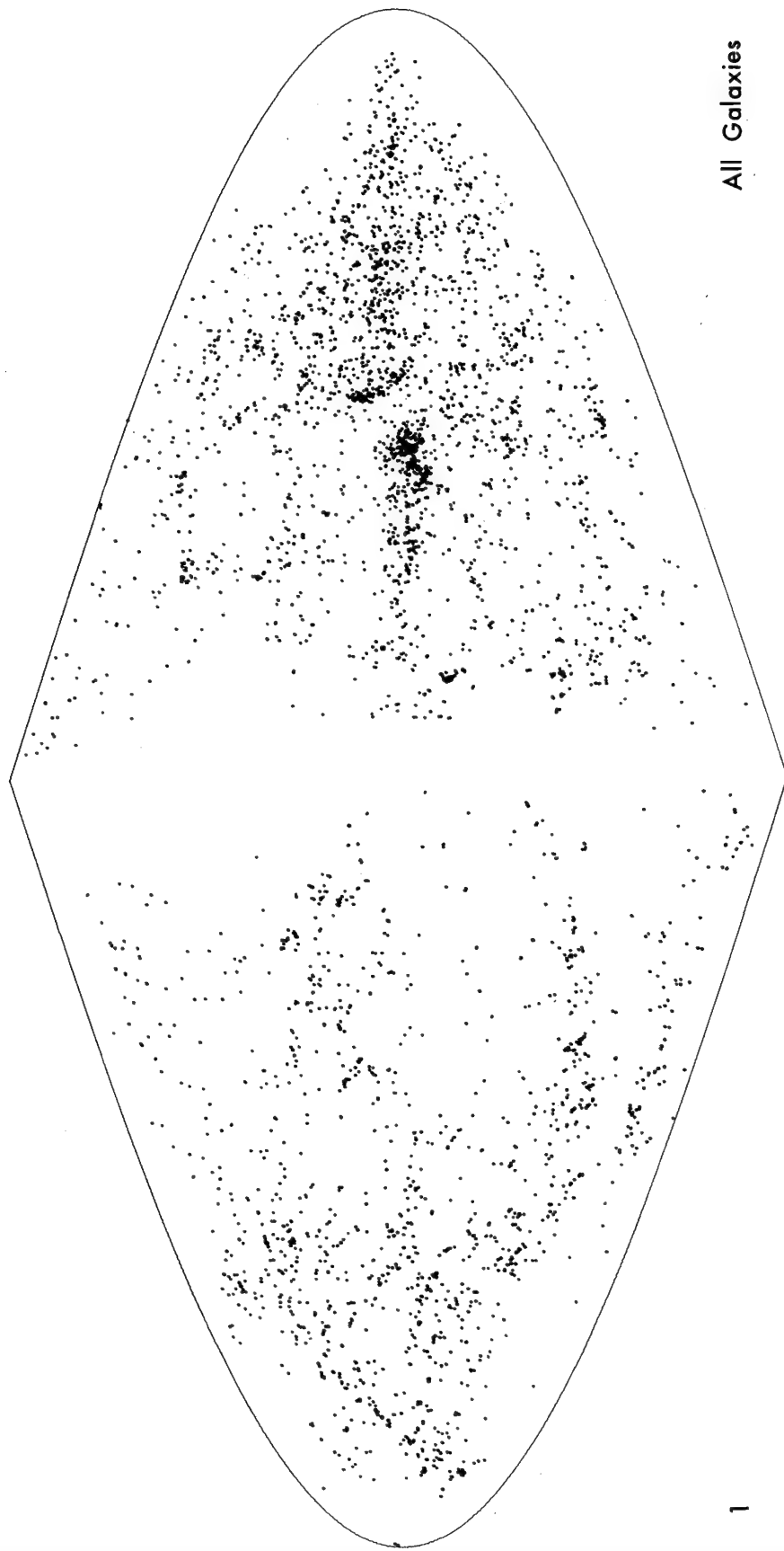
References:

- (1) Buta, R., *Publ. Warner and Swasey Obs.*, II, in press, 1976.
- (2) Corwin, H. G., *Publ. Dept. Astr. U. Texas*, II, 2, No. 12, 1968; II, 3, No. 5, 1970; *Publ. A. S. P.*, 83, 320, 1971; + unpublished 1971-1975.
- (3) Fisher, J. R., and Tully, R. B., *A. and A.*, 44, 151, 1975.
- (4) Holmberg, E., *et al.*, *A. and A. Suppl.* 18, 463 and 491, 1974.
- (5) Nilson, P., *UGC*, 1973; *Uppsala Obs. Rep.* No. 5, 1974.
- (6) Rood, H. J., and Baum, W. A., *A. J.*, 72, 398, 1967.
- (7) de Vaucouleurs, G., *Ap. J. Suppl.* No. 74, 1963; *BGC*, 1964; + unpublished 1964-1975.

The revised morphological type in the *Handbuch der Physik* system (slightly revised, see de Vaucouleurs 1974) was coded as shown in Table 2a to make the notation compatible with the symbols available on the CDC printer. The number of symbols used gives an indication of the degree of resolution available and of the reliability of the classification. A numerical index T of stage along the Hubble sequence is given in column 6 as described in (H² V 1971, de Vaucouleurs 1974) with the following additions and revisions:

- (a) T = -6: compact (high density) ellipticals cE (e.g., M32, N1510, N4486B, N5846A).
- (b) T = -5: dwarf (low density) ellipticals dE (e.g., N147, N185, Sculptor, Fornax), in addition to the normal giant ellipticals E (e.g., N3379).
- (c) T = -4: giant ellipticals with extended optical coronas E⁺ and, in particular, the Morgan cD galaxies (e.g., N4486, N4889, N6166). Objects previously classified E⁺ in BGC as possible transition types between elliptical and lenticulars are not quantitatively distinguishable from true ellipticals and were reclassified as T = -5.
- (d) T = 11: compact blue irregulars cI, sometime called "isolated extragalactic HII regions" (Sargent and Searle 1970, 1972) (e.g., IIZw40, NGC 1741 C and D).
- (e) Ring galaxies: are designated "RING" A or B; A is the spheroidal or nuclear component, B is the ring or irregular component (Freeman and de Vaucouleurs 1974). The approximate numerical index T (generally -2 or -5 for the A component, 10 for the B component) is followed by an R for the true ring systems (e.g., A0004-06 = Arp 146) and by a P where the B component is irregular (e.g., N2444, 45 = Arp 143).

When no better source was available (in particular for the ~ 2000 additional objects not in BGC), a revised type was estimated from (in order of preference) large reflector plates



1

Fig. 1. Distribution of 4364 galaxies in supergalactic coordinates on a Flamsteed equal area projection. The galactic obscuration belt is in evidence vertically across the map and along its edges. North galactic hemisphere is at right of central meridian. Supergalactic longitudes increase from right to left with $SGL = 180^\circ$ at center of map.

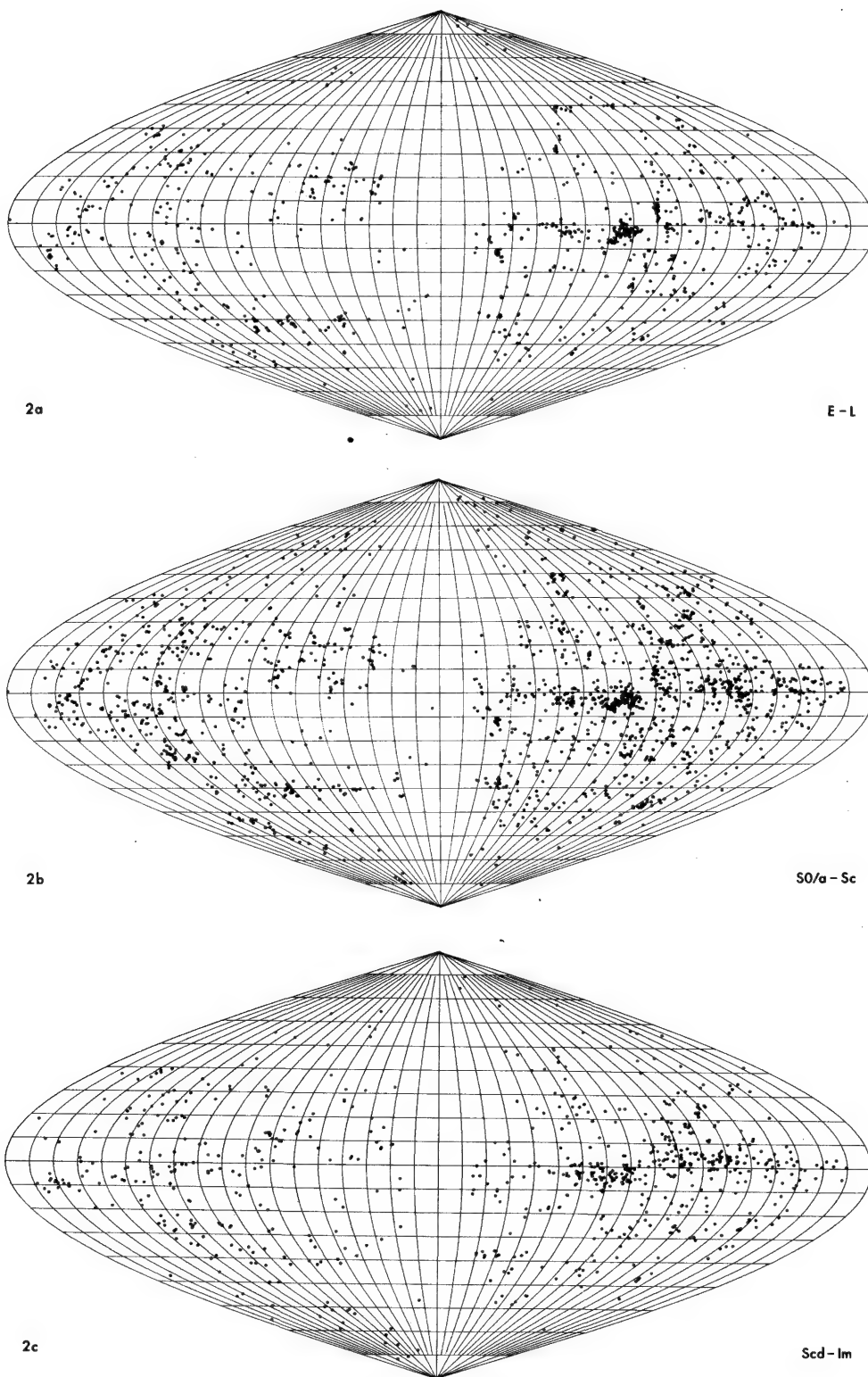


Fig. 2. Distribution in supergalactic coordinates of
a) 1096 elliptical and lenticular galaxies (E-L; $T < 0$);
b) 1783 early-type spirals (S0/a-Sc; $0 \leq T \leq 5$);
c) 770 late-type spirals (Scd-Im; $T > 5$).

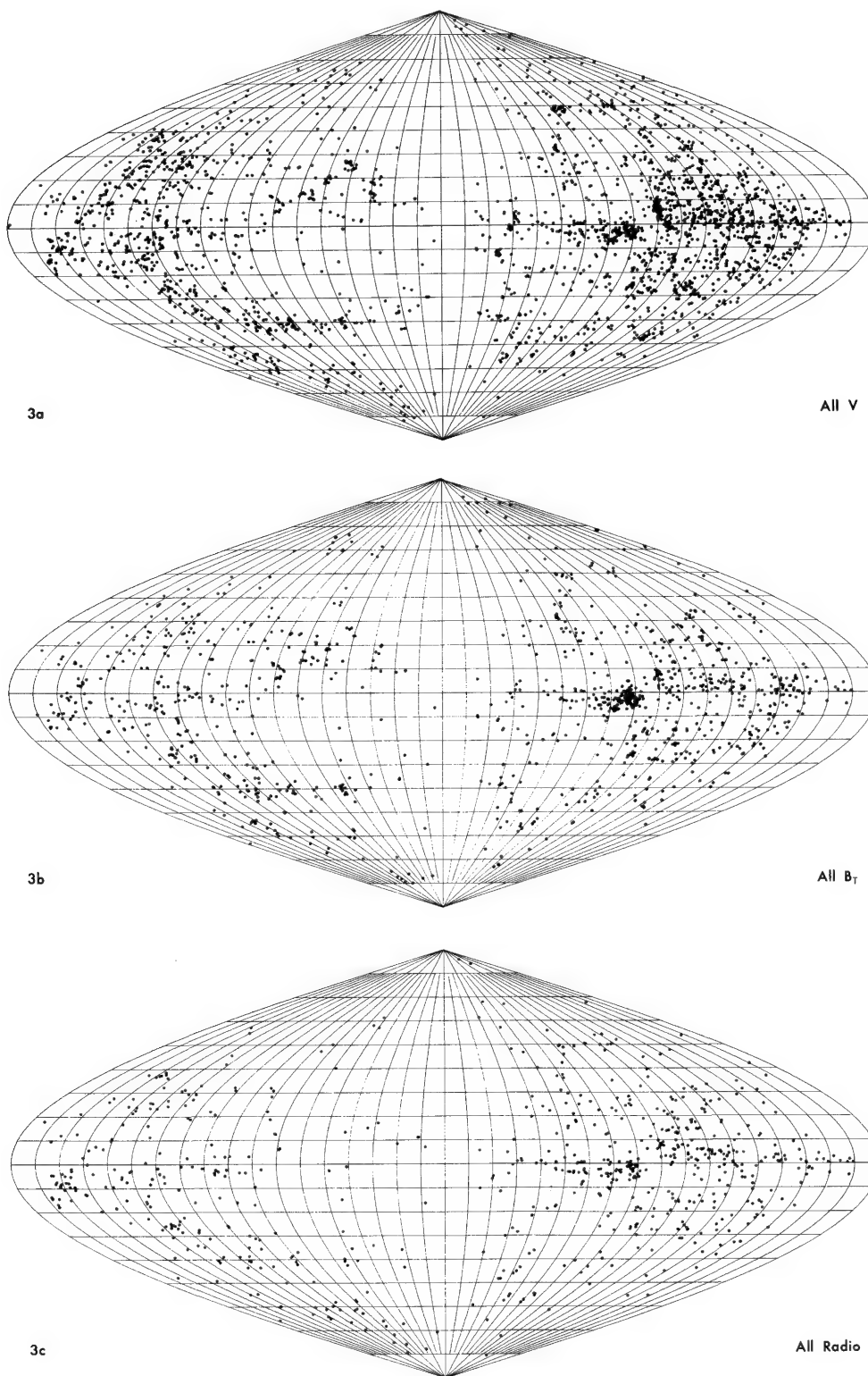


Fig. 3. Distribution in supergalactic coordinates of
a) 2713 galaxies with known redshifts (Column 28);
b) 1341 galaxies with B_T total magnitudes (Column 16);
c) 694 galaxies with HI line or radio continuum data (Columns 24, 26).

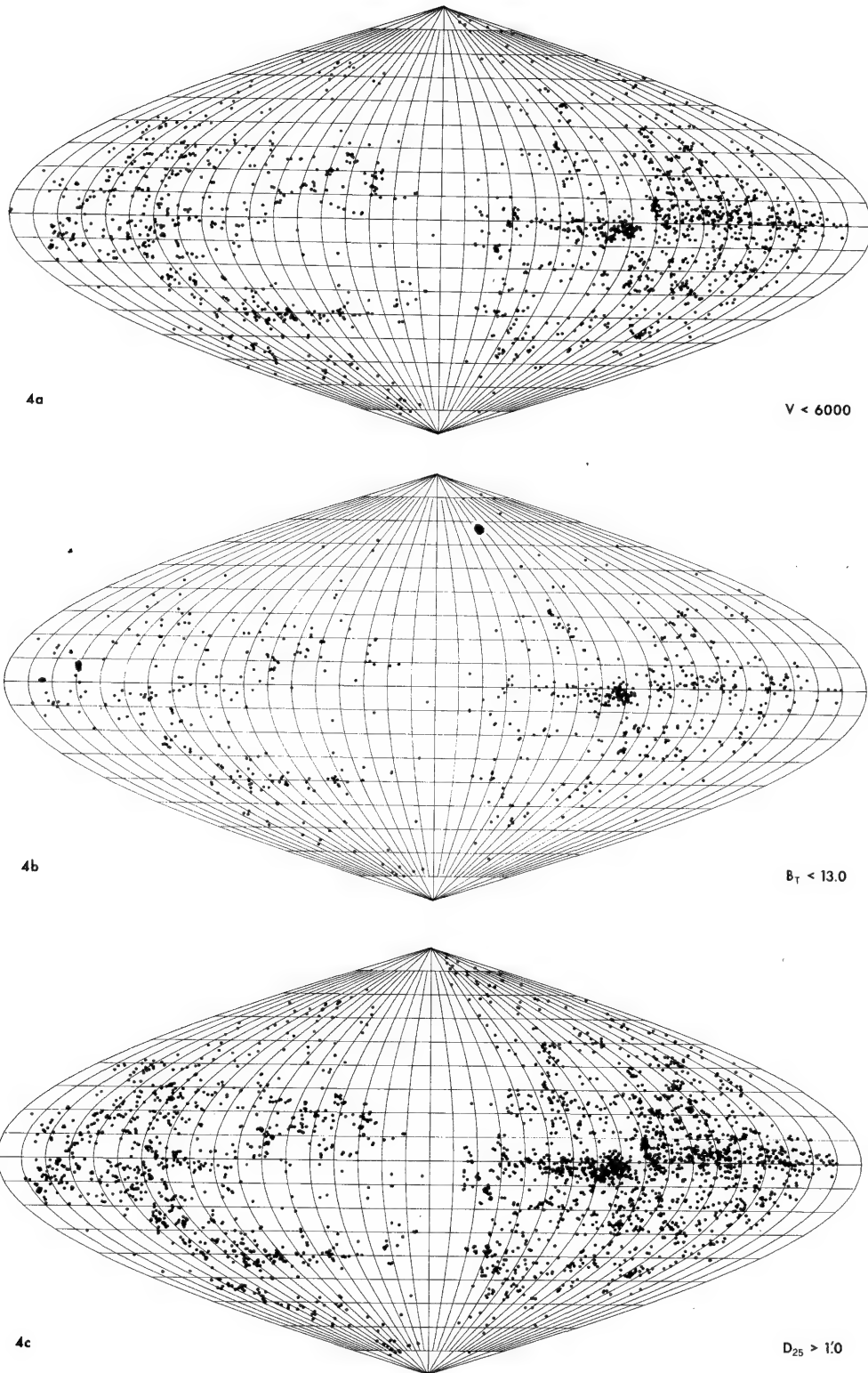


Fig. 4. Distribution in supergalactic coordinates of
a) 2001 galaxies with $V < 6,000 \text{ km s}^{-1}$;
b) 801 galaxies with $B_T < 13.0 \text{ mag.}$;
c) 3456 galaxies with $D_{25} > 1.0$.

Table 2a. Coding of Revised Morphological Types

Classes	Families	Varieties	Stages	T	Type	Code
Ellipticals		Compact	Ellipt. (0-6)	-6	cE	CE...
		"cD"	Interm.	-5	EO	.E.0.
				-5	E0-1	.E.0 ⁺
				-4	E ⁺	.E ⁺ ..
Lenticulars	Ordinary Barred Mixed	Inner ring S-shaped Mixed	Early Interm. Late	-2	S0	.L
					SA0	.LA
					SB0	.LB
					SAB0	.LX
					S(r)0	.L.R
					S(s)0	.L.S
					S(rs)0	.L.T
				-3	S0 ⁻	.L...-
				-2	S0	.L...0
				-1	S0 ⁺	.L...+
Spirals	Ordinary Barred Mixed	Inner ring S-shaped Mixed	0/a a ab b bc c cd d dm m		SA	.SA
					SB	.SB
					SAB	.SX
					S(r)	.S.R
					S(s)	.S.S
					S(rs)	.S.T
				0	S0/a	.S...0
				1	Sa	.S...1
				2	Sab	.S...2
				3	Sb	.S...3
				4	Sbc	.S...4
				5	Sc	.S...5
				6	Scd	.S...6
				7	Sd	.S...7
				8	Sdm	.S...8
				9	Sm	.S...9
Irregulars	Ordinary Barred Mixed	S-shaped	Non-Magell. Magellanic		IA	.IA
					IB	.IB
					IAB	.IX
					I(s)	.I.S
				0	IO	.I.0
				10	Im	.I...9
				11	cl	Cl...
Peculiar Peculiarities (all types)			Peculiarity Uncertain Doubtful Spindle Outer ring Pseudo outer		P	.P
					P	.....P
					:*
					?\$
					sp/
					(R)	R.....
					(R')	P.....

(e.g., by Rood in Coma cluster) or prints (e.g., in Arp Atlas), PSS 48 in. plates (by Corwin) or prints (by Corwin, Nilson, Buta, or Fisher and Tully for DDO dwarfs) and for southern galaxies from the ESO/Uppsala Schmidt Survey (Holmberg *et al.* 1974).

Hubble types by Rood, Nilson, and Holmberg *et al.* have been converted to the revised system and coded as shown by Table 2b.

The degree of reliability of the classification may be roughly estimated from the number N of resolution elements in the galaxy image (de Vaucouleurs 1963) which in a first approximation is proportional to the square of the telescope aperture and to the image area, i.e., $N \propto A^2 (D \times d)$. The relative weight of a classification may, then, be measured by

$$W = \log N \cong 2 \log A + (2 \log D - \log R)$$

where A is the telescope aperture in meters, D is D_{25} in 0'.1 units, $R = D/d$ is the axis ratio. Classifications on glass copies (source PG48C) or negative prints (P048 B, C, F, or N) of the PSS 48 in. survey plates are less reliable than classifications from the original negatives and were assigned half-weight ($\Delta W = -0.3$) and quarter-weight ($\Delta W = -0.6$) respectively. A further reduction ($\Delta W = -0.3$) was applied to classifications from copies of the Sky Survey Whiteoak extension in red light ($\delta < -33^\circ$). Classifications on high-contrast negative paper copies of 200 in. plates (e.g., in the Arp Atlas, source P200C) were also given half-weight. The average weight of the stage index T for 3597 revised types is 2.6 (range 0.2 to 5.0), corresponding to an estimated mean error of $1.5/\sqrt{W} \cong 1$ in T^1 . Revised types are given for 3811

Table 2b. Conversion of Hubble Types to Revised System

Hubble	Revised	T
E	E	-5
E-S0	L ⁻ :	-3:
S0	L	-2
IrrII	IO	0:
S0/a	S0/a	0
Sa	Sa	1
Sa-b	Sab	2
Sb	Sb	3
Sb-c	Sbc	4
Sc	Scd:	6:
Sc-Irr	Sdm:	8:
IrrI	Im	10
S . . .	S .	3?
S "early"	S . (Sa?)	1?
S "late"	S . Sc?	5?

¹ Statistical studies (Brosche 1973) have shown that T correlates well with various physical parameters and can be estimated in good cases ($W \cong 4$) with a m.e. of 0.75 step or 5 per cent of total range of T scale.

Table 3. Coding of DDO (Van der Bergh) Types

Classes	Families	Stages	Type	Coding	Notes
Elliptical		Ellipticity (0-9)	E0	E 0	(1)
Spiral	Ordinary Barred Intermediate	a b ⁻ b b ⁺ c - +	S SB S(B) Sa Sb ⁻ Sb Sb ⁺ Sc S ⁻ S ⁺	S S B S X S 0 S 2 S 3 S 4 S 5 S 6 S 7	
Irregular			Ir Ir ⁺	I I 9	
Peculiar Peculiarities		Bright nucleus Nebulous arms, mild case Nebulous arms, normal Nebulous arms, extreme Patchy arms, mild case Patchy arms, normal Patchy arms, extreme Distorted arms, mild case Distorted arms, normal Distorted arms, extreme Peculiarity Uncertain ? , : , ()	P N (n) n nn (*) * ** (t) t tt p	P N N - N N + K - K K + T - T T + P * * *	(2) (3)
LUMINOSITY CLASSES		I I-II II II-III III III-IV IV IV-V V			1 2 3 4 5 6 7 8 9

(1) Includes lenticulars, especially in E8, E9. (2) Combined cases are coded NK, NT, etc.

(3) Applies to symbol or group of symbols immediately preceding it.

objects or 87.3 per cent of the catalogue (all 1250 S-A objects have a revised type). The classifications of 43 objects with weights $W < 1$ should be considered as tentative only.

b) DDO types and luminosity classes (Column 6, line 2)

The DDO types and luminosity classes L estimated by van den Bergh (1960) on PSS prints are coded as shown in Table 3.

The code numbers for DDO spiral stages are assigned after (de Vaucouleurs 1963). In DDO notation n stands for fuzzy or nebulous arms (coded N), * for patchy arms (coded K), t for distorted arms (coded T); mild cases (coded -) are shown in parenthesis, extreme cases (coded +) are denoted by double symbols. Example: NGC 157, code: S5 K - 1, stands for Sc(*)I, i.e., ordinary late-type spiral with moderately patchy arms, luminosity class I. Additional DDO types are given for the Shapley-Ames objects in the Palomar Sky Survey southern extension ($\delta > -33^\circ$) after van den Bergh (private communication 1969), for some other southern galaxies ($\delta < -27^\circ$), after Sandage and Tammann (1975), and for DDO dwarfs after Fisher and Tully (1975). DDO types are given for 1256 galaxies and luminosity classes for 711 or 28.8 and 16.3 per cent of the catalogued objects (1012 and 489 are in S-A).

Statistical studies (de Vaucouleurs 1964; Sandage and Tammann 1975) demonstrate that for normal, unperturbed galaxies absolute magnitudes derived from L have internal mean errors of 0.4 to 0.6 mag.

c) Yerkes types and color classes (Column 8, lines 1, 2)

Yerkes types and color classes, list 1 from Mt. Wilson-Palomar reflector plates (Morgan 1958), list 2 from 48 inch Palomar-Schmidt plates (Morgan 1959) are coded as shown in Table 4.

The Yerkes system and the revised Hubble system have been compared by de Vaucouleurs (1963). Several of the Yerkes types cannot be directly translated into revised types, but Yerkes color classes are fairly closely correlated with stages of spiral sequence from Sa to Sm (loc. cit. Table 4) and with color residuals at a given Hubble stage (de Vaucouleurs unpublished).

Y(1) and Y(2) types are given for respectively 608 and 645 galaxies or 13.9 and 14.8 per cent of the catalogue (571 and 639 are also in S-A).

d) Hubble-Sandage and Hubble-Holmberg types (Appendix T)

Types given in the Hubble Atlas (Sandage 1961) and additional types in the same system (Sandage 1975) are coded as shown in Table T1 (p. 383).

The Hubble Atlas and revised types were compared by de Vaucouleurs (1963); the correlation is generally good for spiral stages and is reflected in the numerical coding of the stages in Table T1; the correlation is poorer for lenticulars and no simple correspondence exists between H-S stages 1, 2, 3 and stages L^- , L^0 , L^+ ($T = -3, -2, -1$) of the revised system (loc. cit. Table III, 2).

Types given by Holmberg (1958) in a slightly revised Hubble system are coded as shown in Table T2 (p. 383), following a comparison with revised types T (de Vaucouleurs 1963).

A total of 354 H-S and 300 H-Ho types are listed in Appendix T for 566 galaxies.

e) Byurakan and BGC nuclear types (Column 9, lines 1, 2)

The Byurakan nuclear types (Kalloglian and Tovmassian 1964; Tovmassian 1965, 1966,

Table 4. Coding of Yerkes (Morgan) Types

Classes	Type	Code	Color Classes			Code
Elliptical	E(0-7)	E0	a			A
	E-D	ED	af			AF
	D-E	DE	f			F
	S-E	SE	fg			FG
Dusty			g			G
		D	gk			GK
	D-S	DS	k			K
	S-D	SD				
Spiral	S	S	:			*
Barred	B	B				
	(B)	SX				
	B-S	BS				
	S-B	SB				
Irregular			Classes	Type	Code	
	I	I				
	S-I	SI				
	I-S	IS				
	I-B	IB				
	B-I	BI				
			Peculiarities	L (1)		.. L
				P		.. P
				?, :		*

(1) Low surface brightness.

1967; and references to Table 5) on a scale of 1 to 5 are listed in Column 9, line 1, followed on line 2 by an alpha-numeric translation of the nuclear description given in the Notes to the BGC, coded as shown in Table 5. The prefix D attached to the BGC class stands for diffuse nucleus, the suffix L for large nucleus, S, VS, and ES for small, very small, and extremely small nucleus. When two independent Byurakan classifications differ, both are listed as double digit numeral; e.g., 13 means that one type 1 and one type 3 estimates have been published.

There is a loose correlation between Byurakan types and BGC classes; both are correlated with nuclear peculiarities, such as radio emission, Seyfert-type spectra, complex structure (Morgan's "hot spots"), nuclear emission spectra, etc. (see Sérsic and Pastoriza 1965, 1967; Pastoriza 1975).

Byurakan nuclear types are listed for 516 galaxies and BGC nuclear classes for 1103 galaxies (420 of which are in common) for a total of 1239 objects or 28.4 per cent of the catalogue (466 and 853 are in S-A).

3.3. *Isophotal Diameters*

a) Isophotal major diameter $\log D_{2.5}$ (Column 10, line 1)

Table 5. Scales for Byurakan and BGC Nuclear Types

Scale	Byurakan Type (1)	BGC Class (2)
1	No central condensation	No definite nucleus
2	Weak central condensation	Nucleus of average brightness
3	Strong central concentration, but no star-like image	Bright nucleus
4	Star-like nuclear image at short exposure, but nebulous at long exposure	Very bright nucleus
5	Star-like nuclear image even at long exposures	Extremely bright nucleus

References:

- (1) Kalloglian, A. T., and Tovmassian, H. M., *Soob. Byurakan Obs.*, **36**, 31, 1964; Tovmassian, H. M., *Astrofizika*, **1**, 197, 1965; *ibid.*, **2**, 317, 1966; *ibid.*, **3**, 427, 1967; Saakyan, G. S., *ibid.*, **4**, 41, 1968; **5**, 593, 1969; **9**, 51, 1973; Parsamyan, E. S., *ibid.*, **4**, 150, 1968; Iskudaryan, S. G., *ibid.*, **4**, 385, 1968; Mnatsakanian, M. A., *ibid.*, **9**, 57, 1973.
- (2) From description of nucleus in Notes of BGC (p. 159).

Diameters in the original BGC were reduced to a homogeneous system corrected for the known systematic errors of micrometric-photographic data, but the average brightness corresponding to this diameter system was not precisely known and was some unknown function of galaxy type (cf. H²V, 1971, p. 91). There was simply not enough detailed photographic surface photometry of galaxies with precise photoelectric zero-point to allow a reliable calibration of photographic diameters. During the past 15 years significant progress has been made in this direction principally from work at Mt. Stromlo and McDonald (de Vaucouleurs 1960–1975), Flagstaff USNO (Ables 1971), Asiago (Bertola *et al.* 1966–1969; Capaccioli 1974), Cordoba (Sérsic 1968; de Vaucouleurs and Agüero 1973) and St. Andrews (Fraser 1976). We derived photometric parameters in the B system for 118 galaxies in both hemispheres and, in particular, *isophotal* major and minor diameters at the surface brightness level $\mu_B = 25.0 \text{ mag sec}^{-2}$. This level (about one-tenth of the night sky brightness; cf. de Vaucouleurs 1958; Walker 1973) was originally recommended by Redman (1936) and adopted by Liller (1960, 1966); it is only a little fainter than the average for the BGC diameters (H²V 1971, p. 91) and corresponds closely to the maximum diameters detectable by careful visual inspection of the PSS *blue* prints, as given in the MCG ($D_0 \times d_0$) and the UGC.

In addition to the 118 primary photometric standards for $\log D_{25}$, secondary standards were derived for 32 galaxies from the luminosity profiles in Sérsic's *Atlas de Galaxies Australes* (AGA) (1968) with a statistical zero-point correction to the B system (de Vaucouleurs and Agüero 1973). The corrected Cordoba data or the weighted mean of Stromlo and Cordoba were used to strengthen the southern hemisphere standards. A detailed report on iso-

Table 6a. Reduction Constants for Log D₂₅

Source	A(T)	B	C	Range of T or D
BGC	0.01 + 0.023 (5 - T)	1.01	0	T ≤ 4
(D)	0.01	1.01	0	T ≥ 5
MCG	0.13 - 0.010 T	0.95	0	D < 0'.7, all T
(D ₀)	0.13 - 0.010 T	0.95	0'.3	D ≥ 0'.7, all T
UGC	0.22	0.88	0	T < 0
(D)	0.11	0.92	0	T ≥ 0
AGA	0	1.07	0'.14	T < 0
(D ₀)	0	1.00	0'.14	T ≥ 0

photol standard diameters of galaxies will be presented elsewhere.²

The reduction formulae used to transform the log D value from an individual catalogue to the standard log D₂₅ are of the form

$$\log D_{25} = A(T) + B \log (D+C) \quad (1)$$

The coefficients A, B, and C are collected in Table 6a.

The log D₂₅ value in column 10, line 1 is the weighted mean of the values derived from the individual catalogues (BGC log D, MCG log D₀, UGC log D, AGA* log D₀) (* refers to Table V in AGA, p. 148) and of the photometric log D₂₅ for the standard galaxies (denoted S in column 16, line 1).

b) Weights and mean error (Column 10, line 2)

The mean error of log D₂₅ is given by

$$\sigma_w (\log D_{25}) = 0.1/w^{1/2} = 0.1/(\sum w_i)^{1/2} \quad (2)$$

where w_i is the weight of log D₂₅ derived through eq. (1) from the individual catalogues (i = 1 to 4). The relative weights w_i derived by multiple 3-by-3 comparisons of these corrected log D₂₅ are listed in Table 6b.

Many of the low-weight entries in the BGC (often from source A, Heidelberg 9 under-exposed plates) were rejected when clearly aberrant.

Log D₂₅ values are listed for 3872 objects (1237 are in S-A) or 88.7 per cent of the total number of catalogue entries; the average mean error is 0.04 (range 0.32 to 0.02). For 348 objects log D₂₅ has a m.e. in excess of 0.1 and should be regarded as tentative only.

² We considered the alternative choice of $\mu_{pg} \cong 26.5$ corresponding to the often used Holmberg (1958) system of microphotometric diameters, but rejected it because (a) it is not precisely defined, (b) it applies to a much fainter level than most micrometric-photographic diameters, and (c) diameters at this low level (2 per cent of the night sky) are subject to larger systematic and accidental errors aggravated by the very low levels of luminosity and photographic density gradient (cf. H² V, 1971, pp. 93-94).

Table 6b. Relative Weights of Log $D_{2.5}$ [†]

Source	Weights		Rem.
	$T < 0$	$T \geq 0$	
BGC	0.25 w	0.40 w	(1)
MCG	1.8	2.7	
UGC	4.0 w	4.0 w	(2)
AGA	0.5	0.7	
Ptm. Std.	2.8	4.2	
AGA Ptm.	1.6	2.4	

[†] $w = 1$ for $\sigma(\log D) = 0.10$

(1) w = weight of $\log D$ in BGC (column 10, line 2).

(2) $w = 1$, unless marked : or () when $w = 1/2$, :: or () : or ?
when $w = 1/4$, () ? when $w = 1/8$.

c) Isophotal axis ratio $\log R_{2.5}$ and mean error (Column 11, lines 1 and 2)

The axis ratio $\log R = \log D/d$ given in the BGC (Column 11), or calculated from $D_o \times d_o$ given in MCG, or from $D \times d$ (blue) in UGC were compared with $\log R_{2.5}$ derived for the 118 standard galaxies from the axis ratio $(D/d)_{2.5}$ of the isophote $\mu_B = 25.0$. The axis ratio $\log R = \log a/b$ given by Holmberg (1958)—although relating to a fainter isophote level (see 3.3,a, above)—was also reduced to the $\log R_{2.5}$ system since the axis ratio varies only slowly in the outer parts of galaxies (cf. de Vaucouleurs 1958, 1959).

The reduction formulae used to transform a $\log R$ value from an individual catalogue to the $\log R_{2.5}$ system were of the form

$$\log R_{2.5} = A(T) \log R \quad (3)$$

with the coefficients listed in Table 7.

The relative weights w_i , with unit weight for $\sigma(\log R_{2.5}) = 0.10$ were derived from multiple 3-by-3 comparisons of the corrected $\log R_{2.5}$ from the four sources. The $\log R_{2.5}$ values given in Column 11, line 1 are the weighted means of the $\log R_{2.5}$ values derived from the individual sources with the weights w_i given in Table 7.

The mean error of $\log R_{2.5}$ (Column 11, line 2) is $\sigma(\log R_{2.5}) = 0.10/(\sum w_i)^{1/2}$.

$\log R_{2.5}$ values are listed for 3871 objects (1237 are in S-A) or 88.7 per cent of the total with an average $\langle \sigma(\log R_{2.5}) \rangle = 0.04$ (range 0.18 to 0.013). For 398 galaxies $\log R_{2.5}$ has a m.e. in excess of 0.1 and should be regarded as tentative only.

d) Isophotal “face-on” diameters $\log D(0)_{2.5}$ (Column 12, line 1)

The isophotal diameter of a transparent homothetic ellipsoid of volume emissivity $E(r) = E_0 r^{-n}$ and true axis ratio $q_0 = c/a$ varies with inclination as

$$D(i) = D(0) \cdot \left(\frac{a}{b}\right)^{1/(n-1)} \quad (4)$$

where $b/a = q = R^{-1}$ is the projected axis ratio (H²V, 1971, p. 122).

Eq. (4) is of the form

$$\log D(0) = \log D - \frac{1}{n-1} \log R = \log D - C \log R \quad (4)'$$

Table 7. Reduction Constants and Weights for Log R_{25}

Catalogue	T<0		T≥0		Pec or T Unknown	
	A_i	w_i	A_i	w_i	A_i	w_i
Ptm. Std.	1.00	10.	1.00	10.	none	
BGC	0.80	0.7w*	0.85	1.5w*	0.83	w*
MCG	1.00	1.0	1.00	3.0	1.00	2.0
UGC	0.95	4.0w†	0.894	4.0w†	same as T=0	
Ho	1.20	2.0	1.00	2.5	1.10	1.5
AGA ¹	0.76	2.0	1.18	4.0	none	

* w given in column 11, line 2 of BGC.

† w = 1 unless marked uncertain (see Table 6.b above).

¹ From $D_0 \times d_0$ in Table V, p. 148 (not from R_m).

which was used in the BGC to reduce apparent diameters to “face-on” orientation with $C = 0.40$ after de Vaucouleurs (1957); Tully (1968, 1972) argued that this value is excessive and suggested that in fact $C \cong 0$; the study of Heidmann *et al.* (H²V 1971) confirmed that $C < 0.4$, but also demonstrated that it cannot be neglected and that its correct value is actually close to $C \cong 0.2$ at brightness levels corresponding to the diameter system of the BGC. With the more rigorous definition of D_{25} , a precise value of C can be calculated theoretically and empirically verified. From H²V (1971, Table VII, p. 101) the average value of $n - 1$ for spirals at $\mu_B = 25.0$ is $n - 1 = 4.85$ so that $C = 0.206$ for a power law of emissivity.

We have derived a more precise value of C_{25} empirically by two different and independent methods: (1) by repeating with D_{25} and $\log R_{25}$ the F_H/D^2 test of H²V (1971, § 4.3, p. 107) which determines C by the requirement that the surface density of 21 cm flux corrected for self-absorption be independent of inclination, i.e., of $\log R_{25}$, for a given Hubble type T , and (2) by the condition that in groups of galaxies there should be no correlation between $\log R_{25}$ and the “face-on” linear diameter $\log D(0,1)_{25}$ of the first-ranked galaxy. Both analyses lead to essentially the same value of C_{25} (0.242 ± 0.055 and 0.235 ± 0.045). The latter value $C_{25} = 0.235$ was therefore adopted to calculate the “face-on” isophotal diameter

$$\log D(0)_{25} = \log D_{25} - 0.235 \log R_{25} \quad (5)$$

irrespective of type (if C varies with type the effect is too small to be established by current data). A detailed analysis of the dependence of apparent diameters on inclination will be published elsewhere.

e) Corrected “face-on” diameters $\log D_0$ (Column 12, line 2)

The isophotal apparent diameters of galaxies are reduced by galactic extinction (H²V 1971, p. 107). If A_B is the B-band extinction in magnitudes (Column 18, line 1) and $G_{25}^{-1} = \partial(\log D_{25})/\partial\mu$ is the inverse logarithmic gradient of the luminosity profile $\mu(r)$ near $\mu_B = 25.0$, then

$$\log D_0 = \log D + A_B G_{25}^{-1} \quad (6)$$

is the diameter corrected for extinction ($A_B G_{25}^{-1} \ll 1$).

For normal ellipticals ($T = -5$) obeying the $r^{1/4}$ law (de Vaucouleurs 1962)

$$\mu - \mu_e = 8.32 (\rho^{1/4} - 1) \quad (7)$$

where $\rho = r/r_e$ and $\mu_e = \mu(r_e)$, $G_{25}^{-1} = \Delta \log \rho / \Delta \mu = 0.155 \text{ mag}^{-1}$ at the average reduced radius $\langle \log \rho(0) \rangle = 0.46$ corresponding to $D(0)_{25}$. For the average spiral disk ($T = +5$) obeying the exponential law (de Vaucouleurs 1962)

$$\mu - \mu_e = 1.82 (\rho - 1) \quad (8)$$

$G_{25}^{-1} = 0.085 \text{ mag}^{-1}$ at the average reduced radius corresponding to $D(0)_{25}$, (H²V 1971, p. 93 and Fig. 9, p. 102).

The following interpolation formula was adopted

$$G_{25}^{-1} = 0.12 - 0.007 T \quad (9)$$

corresponding to minimum corrections $A_B G_{25}^{-1}$ ranging from +0.031 ($T = 5$) to +0.010 ($T = 10$) near the galactic poles ($A_B \cong 0.20 \text{ mag}$).

f) Effective aperture diameter A_e and mean error (Column 13, lines 1, 2)

When the light flux from a galaxy has been measured through several circular field apertures (diameter $A = 2r$), an integrated magnitude-aperture curve $m(\log A)$ can be drawn (Fig. 5a). From it we derive by extrapolation the total (or asymptotic) magnitude m_T (as explained in sect. 3.4,c) and by interpolation the diameter A_e of the "effective" aperture, i.e., that which transmits half the total flux from the galaxy. For a smooth E0 galaxy with circular isophotes, $A_e \equiv A(m_T + 0.75)$ is, by definition, identical with the effective diameter D_e . If the isophotes depart from circles, A differs from the equivalent effective diameter $D_e^* = 2r_e^* = 2(S_e/\pi)^{1/2}$, where S_e is the total area (including detached "islands", if any) of the effective isophote, the degree of departure depending on the ellipticity and irregularity of the isophotes.

The following statistical relation was found to hold for 60 standard galaxies (sect. 3.3,a) for which A_e values could be estimated from available B-system aperture photometry (sect. 3.4,d) and D_e^* was known from detailed surface photometry

$$\log D_e^* = \log A_e + 0.1(\mu_e' - 12.7) - 0.4 (\log R_{25})^2 \quad (10)$$

with an r.m.s. residual 0.08. However, $\mu_e' = (m_T + 0.75) - 2.5 \log S_e$, the average surface brightness within the effective isophote is not known in general (since it requires detailed surface photometry); instead one may use either $m_e' \equiv \mu'(A_e)$, the average surface brightness within A_e , or m_{25}' , the average surface brightness within the standard isophote $\mu_B = 25.0$ (Column 17, line 2).

Statistical comparisons indicate that when A_e is the variable

$$\log D_e^* = \log A_e - 0.55 (\log R_{25})^2, \quad (11)$$

independent of type and surface brightness, with a r.m.s. residual 0.08. It follows that $\mu_e' = \mu'(A_e) - 2.75 (\log R_{25})^2$.

The mean error of $\log A_e$ (line 2) was calculated from

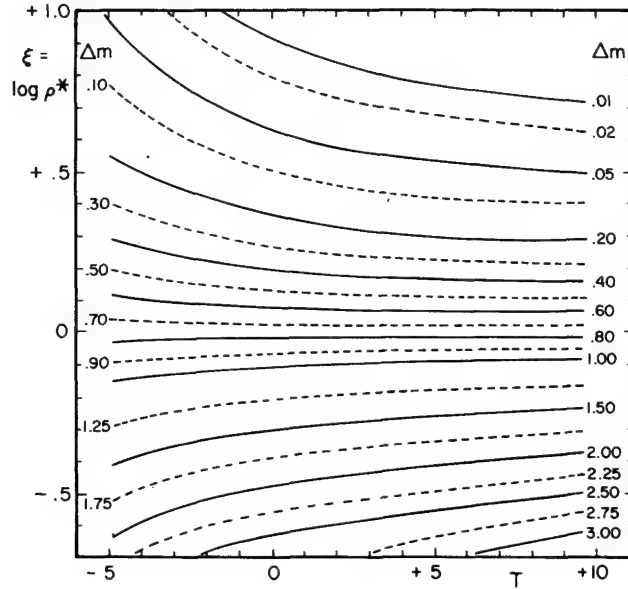
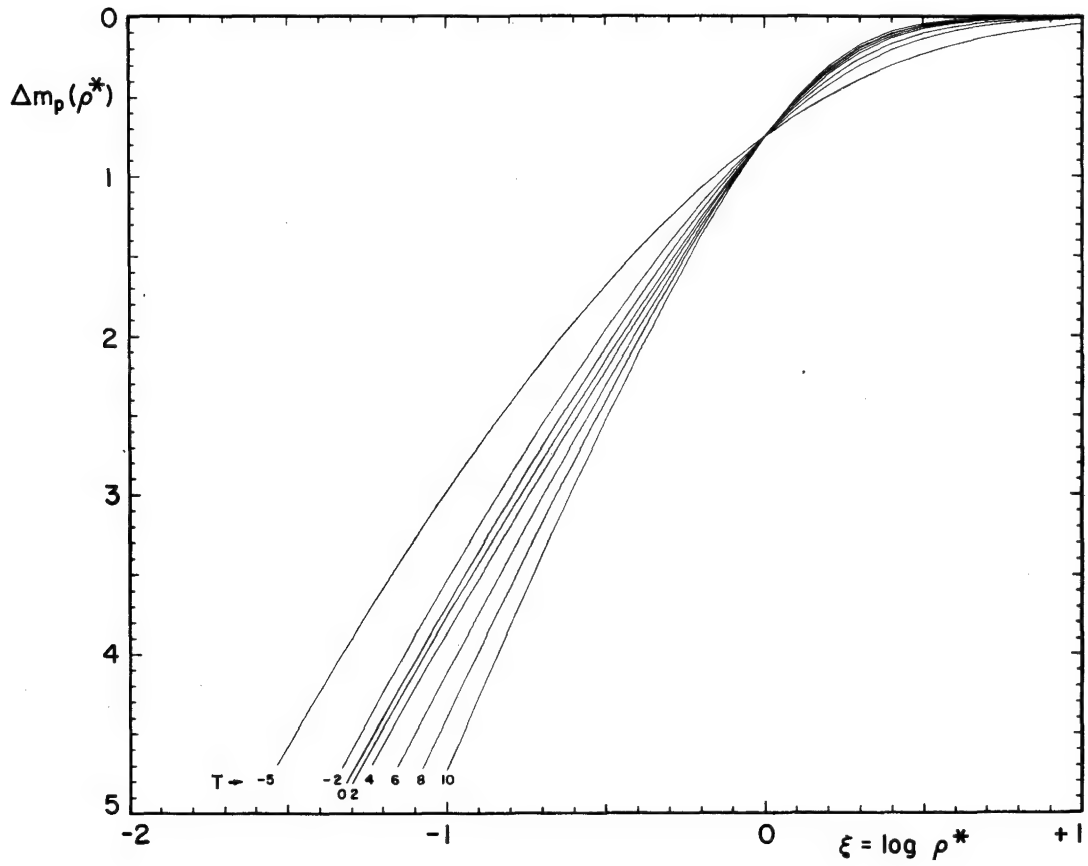


Fig. 5. Normalized magnitude-aperture relations for galaxies of different morphological types.
a) Curves $\Delta m_p(\rho^*) = B(\rho^*) - B_T$ vs. $\xi = \log \rho^* = \log A/D_e^*$ as a function of type index T . A = diameter of aperture, D_e^* = equivalent effective diameter of galaxy. By definition of D_e^* , $\Delta m(\rho^* = 0) = 0.75$ mag.
b) Contours of constant $\Delta m(\rho^*)$ in the (ξ, T) -plane.

$$\sigma_n(\log A_e) = \sigma_1(T)/\sqrt{n} \quad (12)$$

where n is the number of magnitude observations $B(A)$ in the range $-0.3 < \log A/A_e < +0.3$; $\sigma_1(T)$, the mean error of $\log A_e$ corresponding to the standard deviation of $B_T(A)$ is derived from the reciprocal $\partial \log A / \partial (m - m_T)$ of the slope of the magnitude-aperture curves near $A = A_e$, as follows

T	E	L	S0-2	S3-10
$\sigma_1(T)$	0.09	0.07	0.06	0.05

When an interpolation > 0.3 or an extrapolation > 0.2 in $\log A$ was required, $\log A_e$ was not estimated. Effective apertures are listed for 753 objects (521 in S-A) or 17.2 per cent of the catalogue with an average mean error $\langle \sigma_n(\log A_e) \rangle = 0.04$ (range 0.1 to 0.02). An asterisk appears in line 1 for 247 galaxies with multi-aperture photometry insufficient to estimate $\log A_e$.

3.4. Total Magnitudes

a) Harvard magnitudes m_H (Column 15, line 1)

The Harvard photographic magnitude is given for all objects listed in H.A. 88,2 and a few additional objects as noted in BGC, p. 13. An * indicates uncertain values (:), which refer in general to the larger and brighter galaxies or to systems of low surface brightness. Such magnitudes have about $1/4$ of the weight of the others (see 3.4,b).

b) Corrected Harvard magnitudes m_H^c (Column 15, line 2)

The systematic errors of the Harvard magnitudes have been investigated by de Vaucouleurs (1956, 1957) and by Holmberg (1958). Reduction formulae to the B(0) system were given in the BGC (p. 13). A new analysis was made and new formulae derived to reduce m_H

Table 8. Constants for the Reduction of Harvard Magnitudes

a	-0.35 for $T \leq -3$	-0.25 for $T > -3$
b	+0.12 for $T \leq +5$	+0.12 - 0.02 (T-5) for $T > 5$
c	-0.46 for $T \leq +5$	-0.46 + 0.06 (T-5) for $T \geq 5$
d	-2.50 for $T \leq -4$	-0.50 + 0.05 T for $T \geq -3$
μ'	14.05 for $T < 0$	14.25 for $T \geq 0$

to the system of total B magnitudes—defined in section 3.4,c below—through relations of the form

$$m_H^c = m_H + a + b(m_H - 12.0) + c(m_H' - \mu') + d(\log R_{2.5})^2 \quad (13)$$

where

$$m_H' = m_H + 5 \log D_{2.5} - 2.5 \log R_{2.5} - 5.26 \quad (14)$$

is a measure of the average surface brightness (mean value μ') and the coefficients a to d are either constants or functions of galaxy type as shown in Table 8.

The mean error of the corrected Harvard magnitudes (not :) derived by comparison with 620 total magnitudes $B_T(A)$ from aperture photometry is given by

$$\sigma_1(m_H^c) = 0.19 - 0.09 \log R_{2.5} + 0.009 T \quad (15)$$

for $T \geq 0$ (the last term $\equiv 0$ for $T < 0$). Only 8 or 1.3 per cent of the 620 residuals exceed ± 0.6 mag. Corrected magnitudes from 48 uncertain (\therefore) m_H values form two distinct groups: (1) $m_H \leq 9.5$ (12 objects), an additional zero point correction of $+0.95$ mag. was applied and the m_H^c so corrected have a m.e. $\cong 0.30$ mag., (2) $m_H \geq 11.0$ (36 objects), the additional ZPC is -0.30 mag. and the corrected m_H^c have a m.e. $\cong 0.35$ mag. Corrected Harvard magnitudes m_H^c are given for 1237 objects or 99.0 per cent of the Shapley-Ames galaxies and 28.3 per cent of the present catalogue. Corrected magnitudes could not be calculated for 13 galaxies which still lack diameter data.

c) Asymptotic magnitudes B_T and mean errors (Column 16, lines 1, 2)

In the original BGC the magnitude-aperture curves $\Delta m(X) = B(0) - B(X)$, where $X = \log A/D(0)$, could be used only to derive integrated magnitudes $B(0)$ by means of two standard curves: one for early type galaxies ($T \leq 3$), one for later types (BGC, p. 13 and Fig. 7). Total magnitudes could not be derived without significant loss of precision. Detailed photographic surface photometry with photoelectric zero point calibration and reaching to light levels (~ 1 per cent of night sky) faint enough to allow reliable extrapolation of the luminosity integral to "infinite" radius (or zero surface brightness) has now been performed on a number of galaxies sufficient to define a standard system of total (or more exactly asymptotic) magnitudes $B_T(S)$. The sources of $B_T(S)$ and the number of objects of each type are listed in Table 9.

The only morphological types not represented are $T = 8$ and 11 ; most others are represented by 4 to 12 examples. It is, therefore, possible to derive a standard integrated luminosity curve by averaging for each type the quantity

$$\Delta m(\rho^*) = m(\rho^*) - m_T = +2.5 \log [L_T/L(\rho^*)] \quad (16)$$

where m_T is the total magnitude, corresponding to the asymptotic luminosity

$L_T = 2\pi \int_0^\infty I(\rho^*) \rho^* d\rho^*$, if $\rho^* = D^*/D_e^*$ is the reduced equivalent diameter of an isophote and D_e^* is the equivalent effective diameter. By definition of D_e^* , $L(1) = L_T/2$ and $\Delta m(1) = +0.75$ mag. Fig. 5a shows the adopted standard luminosity curves in logarithmic coordinates $\Delta m(\rho^*)$ vs. $\log \rho^*$, and Fig. 5, b contours of constant Δm in the $(T, \log \rho^*)$ plane. Next the relation between the standard curve $\Delta m(\log \rho^*)$ and the mean photoelectric magnitude-aperture relation $\Delta B(X_{2.5}) = B(X_{2.5}) - B(0)$ where $X_{2.5} = \log A/D(0)_{2.5}$ was established for each type by means of least squares sliding fits in both coordinates. In a first approximation the mean relations

$$\begin{aligned} \xi = \log \rho^* &= X_{2.5} + 0.38 & (T \leq -4) \\ \xi = \log \rho^* &= X_{2.5} + 0.54 - 0.024 T & (T \geq -3) \end{aligned} \quad (17a)$$

were used to derive $B_T(A)$ and A_e from $B(X)$ data for each galaxy. The sources of $B(X)$ are listed in Tables 10 and 11; references are in sect. R.II (p. 59). However, since D_e^* is a metric diameter and $D(0)_{2.5}$ an isophotal diameter, the ratio cannot be a constant but must depend on surface brightness. Comparison of $B_T(A)$, A_e and m_e' from the first approximation with $B_T(S)$, D_e^* and μ_e' for the standard galaxies, led to a second approximation,

**Table 9. Sources of Standard Total Magnitudes $B_T(S)$
and Photometric Parameters**

Source		Reference	N
AS		Ables 1971, 1972	7
BS		Bertola <i>et al.</i> 1966-1969	12
FS		Fraser 1971-1975	48
GS		de Vaucouleurs 1960-1975	51
T	-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10		
N	2 12 1 6 7 6 4 5 8 12 12 12 12 4 - 7 7		

References:

- (A) Ables, H. D., 1971, *U.S. Naval Obs. Publ.*, XX, Part IV; *A. J.* 77, 642.
- (B) Bertola, F., 1966, *Contrib. Asiago*, No. 186; 1967, *ibid.*, No. 197; Bernacca, P. L., and Bertola, F., 1969, *ibid.*, No. 214; and private communications.
- (F) Fraser, C., 1971, U. of St. Andrews dissertation and *Mem. R.A.S.*, 1976, in press.
- (G) Vaucouleurs, G. de, 1958, *Ap. J.* 128, 465; 1959, *ibid.*, 130, 728; 1961, *ibid.*, 133, 405; 1962, *ibid.*, 136, 107; 1963, *ibid.*, 137, 720; 1963, *ibid.*, 138, 934; 1964, *ibid.*, 139, 899; 1969, *Ap. Letts*, 4, 17; 1973, *Ap. J.* 181, 31; 1975, *Ap. J. Suppl.*, No. 284, 29, 193; and unpublished data. Vaucouleurs, G. de, and Ables, H. D., 1965, *Publ. Astr. Soc. Pacific*, 77, 272; 1968, *A. J.*, 151, 105. Vaucouleurs, G. de, and Agüero, E., 1973, *Publ. Astr. Soc. Pacific*, 85, 150.

$$\log \rho^*(0) = \log D(0)_{2.5} - \log D_e^* = 0.415 - 0.148(m'_e - 13) \quad (17b)$$

where m'_e is the average surface brightness within the effective aperture A_e , used as an approximation of the average surface brightness μ'_e inside the effective isophote. Second approximation values of $B_T(A)$, A_e , and m'_e were derived and again compared with $B_T(S)$, D_e^* , and μ'_e ; as a result a third and final approximation was obtained

$$\log \rho^*(0) = 0.40 - 0.11(m'_e - 13) + 0.26(\log R_{2.5})^2 \quad (18)$$

and next

$$\xi = \log A/D_e^* = X_{2.5} + \log \rho^*(0)$$

which was used to calculate the total B magnitudes $B_T(A)$. To avoid excessive extrapolations, only observations with $X_{2.5} > -0.5$ were used (galaxies observed with smaller apertures have an asterisk in the B_T column). Data from source F which give often large residuals at $X > 0$ were not used; discordant observations (res. > 0.25 mag.) were rejected. If the $B(A)$ data have abnormally large scatter, B_T and $\log A_e$ are given to 0.1 only. An empirical fit of the

Table 10. Sources of Magnitudes and Colors in UBV System⁺

Code	Source		N		
			B	B - V	U - B
E	de Vaucouleurs, G.	1959, 1961	172	172	171
L	Hodge	1963	101	100	89
M	Shobbrook	1966	86	86	85
N	de Vaucouleurs, G. & A.	1972	1397	1395	1376
P	Bigay	1964	193	193	122
Q	Barnes	1968	76	76	74
S	Westerlund and Wall	1969	115	115	114
T	McClure and van den Bergh	1968	32	32	32
U	Ables, H. and P.	1968, 1972	25	22	14
W	Webb	1964	75	74	68
X	Dibay <i>et al.</i>	1968, 1969	38	39	39
Y	Sandage	1967-1975	675	634	323
Z	Wisniewski and Kleinmann	1968	20	19	19
AD	Andrew	1973	3	3	3
AH	Arhipova	1974	21	20	20
AL	Alcaino	1974	38	37	37
AN	Angione	1974	6	6	6
AR	Arakelian	1972	18	18	18
CW	Chincarini and Walker	1975	65	57	55
DI	Dibay	1970	23	23	22
DU	Dupuy	1969, 1970	31	29	29
DY	Disney	1973	2	2	2
FA	Fairall and Angione	1969	1	1	1
FI	Fitch	1967	7	7	7
FR	Freeman	1973	5	4	4
GR	Graham	1974	1	1	0
HC	Corwin	1967	6	6	5
HI	Hiltner and Iriarte	1958	0	16	16
JO	Johnson, H. L.	1966	1	10	9
KA	Karachentseva <i>et al.</i>	1974	2	2	1
KN	Kinman	1965, 1974	2	2	1
KU	Kunkel <i>et al.</i>	1971	4	4	4
LN	Lynds	1971	1	1	0
LY	Lyuti	1971, 1973	35	34	33
MO	O'Dell and Minkowski	1961	2	2	0
PE	Peterson	1970	35	0	0
PN	Penston	1971, 1973	23	23	23
RB	Rood and Baum	1968	43	9	0
SA	Sargent	1970	39	35	35
SW	Smith, Weedman, <i>et al.</i>	1972	18	18	18
	Osmer <i>et al.</i>	1974			
VB	Van den Bergh	1972	3	3	3
WA	Walker	1964-1968	18	18	18
	Chincarini and Walker	1967			
WE	Weedman	1973, 1974	151	144	138
	Khachikian and Weedman	1974			

⁺ References: see Section R.II.

N = number of observations per source.

Table 11. Sources of Magnitudes and Colors Transformed to UBV System+

Code	Source		Transformation	N	Notes
A. <u>B magnitudes =</u>					
A	Stebbins and Whitford	1937	$P_e + 0.08$	290	(1) (2) (3)
B	Stebbins and Whitford	1952	$P_g + 0.07$	198	
C	Pettit	1954	$m_{pg} + 0.20 - 0.26 CI$	928	
D	Tifft	1961-1973	$[4] + 13.71 + 1.26(B - V)$	526	
F	Bigay	1951	$m_{pg} - 0.03$	392	
G	Holmberg	1958	$m_{pg} + 0.19 - 0.13 C$	295	
H	Bigay <i>et al.</i>	1953-1955	$m_{pg} + 0.26 - 0.22 CI$	130	
K	Whitford	1936	$P_e + 0.08 + 0.09(B - V)$	18	
R	Lasker	1970	$m_3 + 0.119 C_{23} - 0.077 + (B - V)$	199	
NF	Neff	1970	$m_{55} + 0.02 + (B - V)$	19	
B. <u>B - V color indices =</u>					
A	Stebbins and Whitford	1937	$0.834 + 1.477 C_2$	115	
B	Stebbins and Whitford	1952	$0.189 + 0.856 C_p$	84	
C	Pettit	1954	$0.218 + 0.742 CI$	921	
D	Tifft	1961-1973	$0.043 + 0.631[2-4]$	522	
G	Holmberg	1958	$0.209 + 0.871 C$	284	
H	Bigay <i>et al.</i>	1953-1955	$0.278 + 0.779 CI$	131	
R	Lasker	1970	$0.30 + 0.57 C_{13}$	205	
NF	Neff	1970	$-0.045 + 1.589 X_1$	17	
C. <u>U - B color indices =</u>					
D	Tifft	1961-1973	$-0.715 + 0.778[1-3]$	522	
R	Lasker	1970	$-1.31 + 1.47 C_{01}$	186	
NF	Neff	1970	$+0.025 + 0.706 (X_2 + X_3)$	18	

+ References, sect. R. II.

N = number of observations in source.

(1) Constant = 0.21 in *A. J.*, 68, 302, 1963.

(2) Photographic Fabry photometry, rejected.

(3) B - V derived or estimated from other sources.

standard curves using approximate diameters measured on the PSS prints was made for galaxies without D_{25} information, and the curve for $T = 0$ was used when T is unknown provided $X_{25} > 0$; the resulting errors on B_T are generally less than 0.1 mag.

The mean error of $B_T(A)$ given on line 2 is

$$\sigma_n(B_T) = \sigma_1 / \sqrt{n} \quad (19)$$

where n is the number of observations of $B(A)$ in the interval $-0.5 < X_{25} < +0.5$ and $\sigma_1 = 0.13$ mag. (independent of type) is the average standard deviation of the observations from the best-fitting standard curves for $X_{25} > -0.5$. The range of n is 1 to 17 with $\bar{n} \cong 3$ and

$\langle \sigma(B_T) \rangle = 0.08$ mag. This average mean error is confirmed by 3-by-3 comparisons with $B_T(S)$ and m_H^c .

Many galaxies have been observed only through one aperture and it is not possible to derive both m_T and A_e , so that eq. (18) cannot be used. In such cases we derived an approximate total magnitude from eq. (17a) and the appropriate standard curve, but only if $\Delta m(\rho^*) < 0.5$ mag.; the B_T so derived for 241 galaxies are given on line 1 to 0.1 mag. only and assigned a 0.15 mag. mean error on line 2. An exception was made for total magnitudes of 86 galaxies derived from the Holmberg (1958) photometry, because in this case the published magnitude depends on a numerical integration down to $\mu_{pg} \cong 26.5$ —or, on the average, $\langle \xi \rangle \cong 0.80$ —and the extrapolation correction $\Delta m(\rho^*)$ is always quite small; the largest correction is 0.24 mag. and the mean is only 0.02. A mean error of 0.11 mag. was

Table 12. Coding of B_T Magnitudes and Mean Error

Source	B_T (Line 1) Last digit	m.e. (Line 2)	Notes
a) Standard galaxy $B_T(S)$ from surface photometry	0.01S	≤ 0.14	(1)
b) Integrated photometry only from source G (Holmberg)	0.01	0.11	(2)
c) Multi-aperture photometry with m.e. from eq. (19)	0.01	$0.13/\sqrt{n}$	
d) Multi-aperture photometry with <u>estimated</u> m.e.	0.1 or 0.05	0.1 or 0.2	(3)
e) Single-aperture photometry from one source only	0.1	0.15	
f) Surface photometry from source AGA (Sérsic) only	0.1	0.3	(4)
g) Some aperture photometry unsuitable to derive B_T	*	—	(5)

Notes:

- (1) See Table 9; B_T is often a weighted mean with $B_T(A)$ or other sources.
- (2) Corrected to B system and extrapolated (Table 11).
- (3) As c, but abnormally large scatter.
- (4) Corrected to B_T system.
- (5) e.g., maximum $\xi < 0$. Multi-aperture data are signaled by * in Columns 13, 19, 20, 21, and 22; single-aperture data by * in Column 19 (and 20 if U - B data exist also).

estimated for the B_T values derived from Holmberg's data only. No total magnitude could be derived for 224 galaxies with single aperture observations requiring corrections in excess of 0.5 mag.; the existence of such fragmentary photometry is signaled by an * on line 1.

The total magnitudes $B_T(S)$ of 118 standard galaxies have in general mean errors $\sigma(B_T) = 0.14$, except for a few with individually calculated errors. For these 118 objects the magnitudes in column 16 are weighted means from $B_T(A)$ and $B_T(S)$ and the adopted B_T is followed by the letter S.

Total magnitudes B_T are listed for 1340 galaxies (of which 817 are S-A objects) or 30.7 per cent of the present catalogue; 1015 are from multiple-aperture observations and/or surface photometry, and 325 from single-aperture photometry. The average mean error is 0.09 mag. (range 0.20 to 0.03).

The coding of B_T magnitudes according to their source and the corresponding mean errors are given in Table 12.

d) Surface brightness parameters m'_e and $m'_{2.5}$ (Column 17, lines 1,2)

The average surface brightness within the effective isophote (equivalent diameter D_e^*),

$$\mu'_e = (m_T + 0.75) + 5 \log D_e^* - 5.26$$

is probably the most rational measure of projected luminosity density in the image of a galaxy. However, this quantity can be derived only from detailed quantitative isophotometry and is currently available only for the 118 standard galaxies. We have introduced as useful substitutes two related parameters that are more easily derived:

(1) m'_e , the average surface brightness within the effective aperture A_e (column 13) defined by

$$m'_e = \mu'_e(A_e) = (m_T + 0.75) + 5 \log A_e - 5.26$$

where m'_e is expressed in $\text{mag} (\text{arc min})^{-2}$ when A_e is in *tenths* of arc minute and $m_T = B_T$ (or m_H). Comparisons of m'_e and μ'_e (or A_e and D_e^*) for 66 standard galaxies gives the following statistical relation

$$\mu'_e = m'_e - 2.75 (\log R_{2.5})^2 \quad (20)$$

with a r.m.s. residual of $\cong 0.6$ mag. If μ'_e and m'_e contribute equally to the scatter, the mean error of each is $\cong 0.4$ mag. Trial solutions show little or no dependence on type T or on m'_e . Values of m'_e are listed for 752 galaxies (of which 521 are in S-A) or 17.2 per cent of the catalogue.

(2) $m'_{2.5}$, the average surface brightness within the ellipse of major axis $D_{2.5}$ and axis ratio $R_{2.5}$ (Columns 10, 11), defined by

$$m'_{2.5} = (m_T + \Delta m_{2.5}) + 5 \log D_{2.5} - 2.5 \log R_{2.5} - 5.26 \quad (21)$$

where $\Delta m_{2.5} = 2.5 \log L_T/L(D_{2.5}) = B_{2.5} - B_T$ is the magnitude increment contributed by the outer regions of a galaxy fainter than $\mu_B = 25.0 \text{ mag sec}^{-2}$. From the standard curves and mean values of $\log \rho(0)$ the following average corrections were derived for different types

Types	E	L	SO/a to Im
$\Delta B_{2.5} (\text{mag.})$	0.25	0.13	0.11

Evidently there is no simple relation between $m'_{2.5}$ and m'_e or μ'_e since the ratio between an isophotal diameter such as $D_{2.5}$ and metric diameters such as A_e^* or D_e^* will vary with type and depend also on surface brightness itself. However, $m'_{2.5}$ is a useful index of surface brightness which can be calculated for a larger fraction of the galaxies than either m'_e or μ'_e . Values

of $m'_{2.5}$ are given with an average mean error of 0.25 mag. (range 0.15 to 0.35) for 1692 galaxies or 38.8 per cent of the catalogue (1237 are in S-A). Most are in the range 12 to 16 B mag (arcmin)⁻². For galaxies having both m'_e and $m'_{2.5}$ there is a loose linear correlation between the two surface brightness parameters with $m'_{2.5}$ increasing faster than m'_e , from $m'_{2.5} \cong 10.5$, $m'_e \cong 12.5$ for the brightest objects to $m'_{2.5} \cong m'_e \cong 15.5$ for the faintest. The dispersion of m'_e at a given $m'_{2.5}$ is $\cong 0.5$ mag. A detailed analysis of the surface brightness parameters of galaxies will be presented elsewhere.

e) Galactic extinction corrections A_B and corrected "face-on" magnitudes B_T^0 (Column 18, lines 1, 2)

The galactic extinction has been rediscussed by many authors in the past 12 years (Neckel 1965; Shane and Wirtanen 1967; de Vaucouleurs and Malik 1969; Peterson 1970; Sandage 1973; Knapp 1974; Knapp and Kerr 1974; Holmberg 1974; Heiles 1975). From these studies it has become clear that (1) the polar extinction $A_B \cong 0.25$ to 0.5 mag derived from the classical interpretation of galaxy counts is biased and much too large; (2) on the other hand, the concept of clear windows; i. e., $A_B = 0$, within $\cong 40^\circ$ from both galactic poles is an oversimplification in contradiction with the observation of widespread HI emission over the polar cap and the evidence for a fairly constant dust/gas ratio; (3) furthermore, the departures of the absorption equator from the standard galactic plane and the dependence of the extinction coefficient on longitude cannot be neglected; (4) the differential extinction (reddening) of galaxies in high northern latitudes may be a misleading index of total extinction because of the anti-correlation between galactic and supergalactic latitudes and the evidence for excess reddening at low supergalactic latitudes, whatever its cause (Takase 1972; de Vaucouleurs *et al.* 1972; Abadi and Edmunds 1976).

From new analyses of Lick and Mt. Wilson galaxy counts, bright galaxy colors, and optical to radio emission ratios (to be reported elsewhere), we conclude that the best current estimates of the total B extinction is $A_B = 0.19$ mag. at the north galactic pole, $A_B = 0.21$ mag. at the south galactic pole, and the extinction in the direction of galactic coordinates ℓ , b is given by the following expressions

$$\begin{aligned} A_B &= 0.19 (1 + S_N \cdot \cos b) |C| & (b > 0) \\ A_B &= 0.21 (1 + S_S \cdot \cos b) |C| & (b < 0) \end{aligned} \quad (22)$$

where

$$\begin{aligned} S_N(\ell) &= 0.1948 \cos \ell + 0.0725 \sin \ell \\ &+ 0.1168 \cos 2\ell - 0.0921 \sin 2\ell \\ &+ 0.1147 \cos 3\ell + 0.0784 \sin 3\ell \\ &+ 0.0479 \cos 4\ell + 0.0847 \sin 4\ell, \\ S_S(\ell) &= 0.2090 \cos \ell - 0.0133 \sin \ell \\ &+ 0.1719 \cos 2\ell - 0.0214 \sin 2\ell \\ &- 0.1071 \cos 3\ell - 0.0014 \sin 3\ell \\ &+ 0.0681 \cos 4\ell + 0.0519 \sin 4\ell, \end{aligned}$$

with, for both hemispheres,

$$C = \csc [b - b_0(\ell)] = \csc (b + 0^\circ.25 - 1^\circ.7 \sin \ell - 1^\circ.0 \cos 3\ell) \quad (23)$$

Values of A_B calculated from eq. (22, 23) are listed for all catalogued objects, except Maffei 1 and 2 where A_B is large and essentially unknown. For the Circinus galaxy we adopted $A_B = 2.30$ from $E(B-V) = 0.50$ (Freeman *et al.* 1976) instead of the calculated value. (At

very low galactic latitudes the calculated values of A_B tend to be too low near $\ell = 90^\circ$ and too high near $\ell = 270^\circ$. The 41 values of $A_B \geq 1.0$ mag should be regarded as tentative only.)

The corrected total magnitude $B_T^0 \equiv B_T(A_B=0, i=0, z=0)$, (Column 18, line 2) is the magnitude corrected for galactic extinction, internal extinction, and redshift.

The internal extinction in the B system as the inclination increases from 0° to i is

$$A(i) = 0.70 \log \sec i \quad (i < 80^\circ)$$

after H^2V (1971, p. 134); departures between this relation and $A(i)$ curves from model calculations (loc. cit., Fig. 15) average ± 0.04 mag. for $i < 80^\circ$ and $0.1 < \Delta m < 2.0$ mag., if Δm is the optical thickness of the absorbing layer ($\Delta m_B = 0.40$ mag. in our Galaxy). However, i is not known for most galaxies and the closely correlated variable $\log R_{2.5}$ must be used as a substitute in most cases. From plots of $\log R_{2.5}$ vs $\log \sec i$ for 91 galaxies in several groups of types (H^2V , Table VIII, p. 101), we derived the equivalent relation

$$A(i) = \alpha(T) \log R_{2.5} \quad (24)$$

with

$$\begin{aligned} \alpha(T) &= 0 & \text{for } T \leq -4 \\ &= 0.2 (T + 4) & \text{for } -3 \leq T \leq -1, \\ &= 0.7 & \text{for } T = 0 \\ &= 0.8 & \text{for } 1 \leq T \leq 8, \\ &= 0.1 T & \text{for } T \geq 8. \end{aligned}$$

Since $\log R_{2.5} < 1$, the maximum correction is ≤ 0.8 mag. and the average correction is $\cong 0.25$ mag.

Subtracting this quantity from the observed magnitude produces the face-on magnitude (not the absorption-free magnitude). The face-on magnitude is the proper measure of intrinsic luminosity for most applications, for example for use as distance indicator, in mass/light or optical/radio emission ratios, etc. For special applications, such as chemical and stellar population composition, where the intrinsic stellar flux (and color) may be needed, an approximation of the absorption-free luminosity may be obtained by subtracting an additional 0.17 mag. (for $T \geq -3$ only). But as was shown in H^2V (1971, § 7.3), the absorption-free magnitude of a galaxy is uncertain because the correction varies greatly with the (unknown) details of the dust distribution.

The effect of redshift on the integrated B magnitudes has been precisely derived by Pence (1976) for all normal galaxy types by numerical integration of spectral energy distribution functions measured at McDonald Observatory by Wells (1972) and extended in the UV by means of the OAO-2 filter photometry (Code *et al.* 1971). For small z the following linear approximation is sufficient

$$K_B(z, T) = K_B(T) \cdot z = K'_B(T) \cdot cz \quad (25)$$

where cz is the observed (heliocentric) velocity in km s^{-1} and

$$\begin{aligned} 10^4 \cdot K'_B(T) &= 0.15 & \text{for } T \leq 0 \\ &= 0.15 - 0.025 T & \text{for } 0 \leq T \leq 3 \\ &= 0.075 - 0.010 (T-3) & \text{for } T \geq 3 \end{aligned}$$

The maximum correction for $cz = 10^4 \text{ km s}^{-1}$ is 0.15 mag. for $T < 0$ and $\cong 0.05$ mag. for $T > 3$.

Then the corrected face-on total magnitude of a galaxy is

$$B_T^0 = B_T - A_B - \alpha(T) \cdot \log R_{2.5} - K'_B(T) \cdot cz \quad (26)$$

Corrected total magnitudes B_T^0 are given for 1011 objects (of which 697 are in S-A) or 23.2 per cent of the present catalogue.

3.5 Color Indices

a) Asymptotic colors indices $(B - V)_T$, $(U - B)_T$ and mean errors (Columns 19, 20, lines 1, 2)

Standard color-aperture ratio curves for $B - V$ and $U - B$ were derived for each morphological type from an analysis of 2962 color measurements of 497 galaxies. In the range of interest, $-1 < \xi = \log A/A_e < +1$, the curves can be approximated with sufficient precision by the Laplace-Gauss integral

$$\Delta(U - V)_\xi = (U - V)_\xi - (U - V)_{\xi_0} = \frac{1}{2}\Delta(T) \int_0^{\xi - \xi_0} \exp [-(\xi - \xi_0)^2 / 2\sigma_\xi^2] \cdot d\xi \quad (27)$$

where $\xi_0 = -0.25$ and $\sigma_\xi = 0.6$ for all types and the total amplitude $\Delta(T)$ varies with type as follows:

T	-5	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
100 $\Delta(T)$	16	17	18	19	22	26	40	50	50	40	30	20	10	-10	-20

The total color amplitude $\Delta(U - V)_\xi$ was apportioned between $B - V$ and $U - B$ by the relations

$$\begin{aligned} \Delta(B - V)_\xi &= (0.36 + 0.03 T) \cdot \Delta(U - V)_\xi \\ \Delta(U - B)_\xi &= (0.64 - 0.03 T) \cdot \Delta(U - V)_\xi \end{aligned} \quad (28)$$

derived from an analysis of color ratios in V^2 (G. and A. de Vaucouleurs 1972, Table 2). The resulting correction curves are shown in Fig. 6,a, b. A detailed analysis of galaxy colors and justification for this procedure will be presented elsewhere.

The asymptotic integrated color-indices $(B - V)_T$, $(U - B)_T$ were calculated as averages of

$$\begin{aligned} (B - V)_T &= (B - V)_\xi + \Delta(B - V)_\xi - \frac{1}{2}\Delta(B - V)_T \\ (U - B)_T &= (U - B)_\xi + \Delta(U - B)_\xi - \frac{1}{2}\Delta(U - B)_T \end{aligned} \quad (29)$$

for all observations with apertures $\xi > 0$. In this range differential inclination effects are negligible and the maximum correction is < 0.1 mag. in both colors.

The mean errors of the asymptotic color indices (line 2) were calculated by

$$\sigma(C_T) = \sigma_1(T) / \sqrt{n_T} \quad (30)$$

where n_T is the number of observations at $\xi > 0$ and $\sigma_1(T)$ was derived from an analysis of (O - C) residuals as follows

T	-6 to -1	0,1	2 to 8	9,10
$\sigma_1(B - V)$	0.05	0.04	0.05	0.04
$\sigma_1(U - B)$	0.06	0.05	0.05	0.05

Rejection rules for abnormal residuals were similar to those applied to magnitudes (sect. 3.4,c). Total color indices from multiple-aperture data are listed for 959 galaxies in $(B - V)$ and for 682 galaxies in $(U - B)$ or 21.9 and 15.6 per cent of the present catalogue. The average mean errors are 0.03 for $(B - V)_T$ (range 0.10 to 0.01) and 0.04 for $(U - B)_T$ (range 0.10 to 0.02).

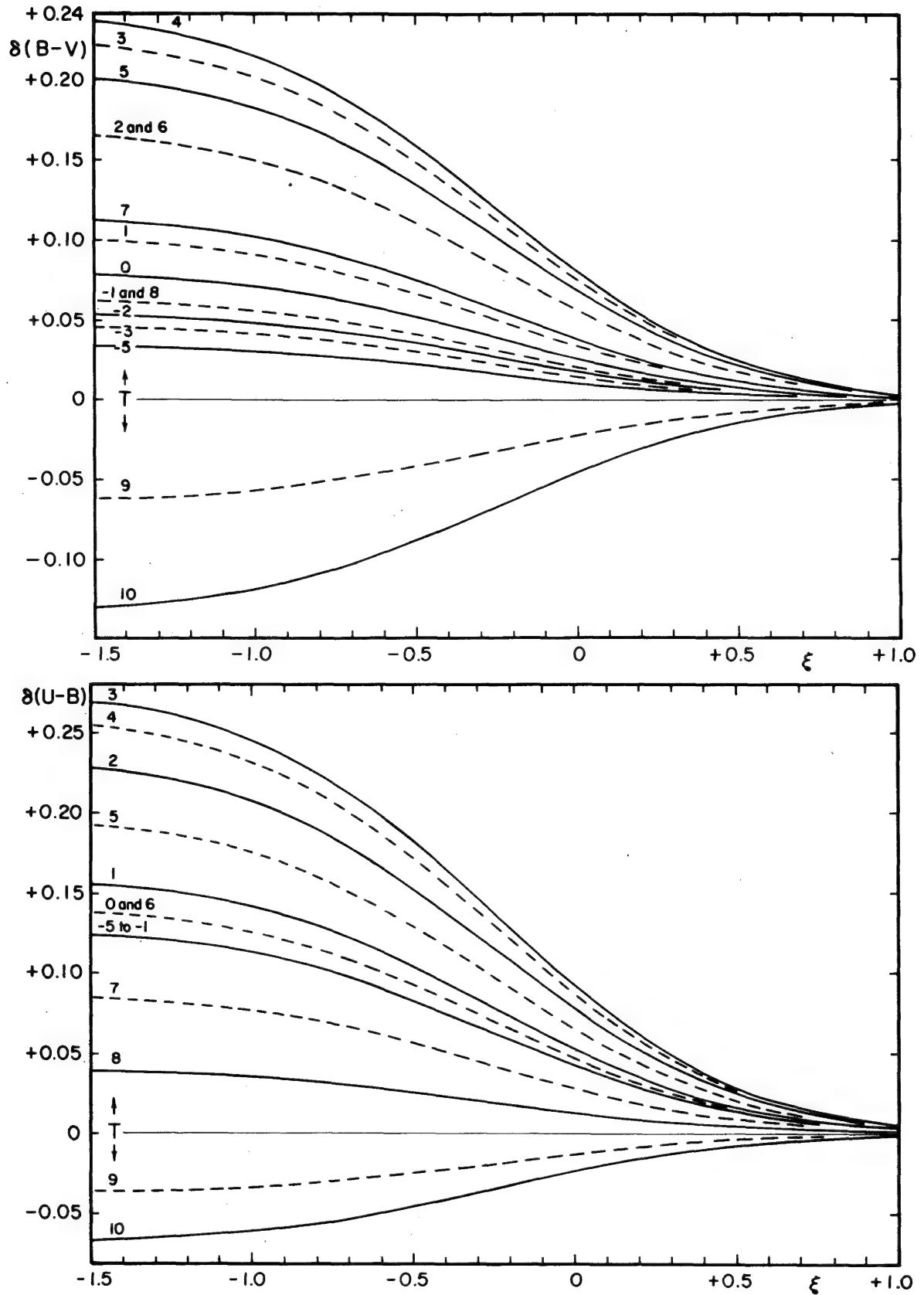


Fig. 6. Normalized color-aperture relations for galaxies of different morphological types.
a) Curves $\delta(B-V) = (B-V)(\xi) - (B-V)_T$ vs. $\xi = \log \rho^*$ as a function of type T.
b) Curves $\delta(U-B) = (U-B)(\xi) - (U-B)_T$ vs. $\xi = \log \rho^*$ as a function of type T.

In addition approximate asymptotic colors were also calculated for galaxies with single-aperture data and for which $\Delta m(\rho^*) < 0.5$ mag. (cf. sect. 3.4, c). The maximum corrections are 0.05 mag. in $(B - V)$ and 0.06 mag. in $(U - B)$. The color indices so derived for 222 galaxies in $(B - V)$ and 132 in $(U - B)$ are identified by their estimated mean errors 0.06 and 0.07 mag., exceeding any of those calculated by eq. (30) for multi-aperture data. The $(B - V)_T$ indices derived for 84 galaxies from the Holmberg (1958) photometry required only minimal corrections (≤ 0.02 mag.) and are identified by their estimated mean error of 0.07 mag. (cf. de Vaucouleurs 1961, p. 288).

Total color indices from single-aperture observations are listed for 394 objects in $(B - V)$ and 130 in $(U - B)$. All together 1260 values of $(B - V)_T$ and 811 of $(U - B)_T$ are given for 29.1 and 18.9 per cent of the catalogued galaxies (of which 761 and 494 are S-A objects).

b) Effective aperture color indices $(B - V)$ (A_e), $(U - B)$ (A_e), and mean errors (Columns 21, 22, lines 1 and 2)

While an extrapolation is always required to derive the asymptotic color indices, it is generally possible to derive by interpolation the color indices $(B - V)$ (A_e) and $(U - B)$ (A_e) corresponding to the effective aperture A_e for most galaxies with multi-aperture observations. The average color differentials between total and effective aperture magnitudes

$$\begin{aligned}\Delta_e(B - V) &= (B - V)(A_e) - (B - V)_T \\ \Delta_e(U - B) &= (U - B)(A_e) - (U - B)_T\end{aligned}\quad (31)$$

are as follows:

T	-5	-3	-2	-1	0	1	2	3
100 $\Delta_e(B - V)$	1.1	1.5	1.8	2.1	2.6	3.4	5.6	7.5
100 $\Delta_e(U - B)$	4.3	4.3	4.3	4.3	4.8	5.4	7.9	9.3

T	4	5	6	7	8	9	10
100 $\Delta_e(B - V)$	8.0	6.8	5.4	3.8	2.0	-2.1	-4.4
100 $\Delta_e(U - B)$	8.8	6.6	4.7	2.9	1.4	-1.3	-2.3

The effective aperture color indices given in Columns 21, 22 are averages of the asymptotic values corrected to A_e for all observations in the interval $-0.5 \leq \xi \leq +0.5$. Because a different range ($\xi > 0$) was used to calculate the asymptotic colors, the differences between Columns 19, 20, 21, and 22 may occasionally differ appreciably from the Δ_e values tabulated above.

The mean errors of the effective colors (line 2) were calculated by

$$\sigma(C_e) = \sigma_1(T)/\sqrt{n_e}$$

where n_e is the number of observations in the interval $-0.5 \leq \xi \leq +0.5$ and $\sigma_1(T)$, derived from an analysis of residuals, has the following values:

T	-5 to -1	0,1	2 to 5	6 to 8	9,10
$\sigma_1(B - V)$	0.05	0.05	0.06	0.05	0.04
$\sigma_1(U - B)$	0.06	0.05	0.05	0.05	0.05

Values of $(B - V)$ (A_e) and of $(U - B)$ (A_e) are listed for respectively 751 and 668 galaxies (of which 520 and 478 are in S-A) or 17.2 and 15.3 per cent of the present catalogue.

The average mean error is 0.03 (range 0.10 to 0.01) in $(B - V)$ and 0.04 (range 0.10 to 0.01) in $(U - B)$.

c) Corrected “face-on” color indices $(B - V)_T^0$ and $(U - B)_T^0$ (Column 23, lines 1, 2)

The corrected total color indices $(B - V)_T^0 \equiv (B - V)_T(A_B = 0, i = 0, z = 0)$ and $(U - B)_T^0$ are corrected for differential galactic extinction, internal extinction and redshift between the U, B, and V bands.

The differential galactic extinction in $(B - V)$, i.e., the color excess E , was calculated as

$$E(B - V) = A_B / (R + 1) \quad (32a)$$

where

$$R = \frac{A_V}{E(B - V)} = \frac{3.1 + 0.3(B - V)}{1 - 0.03 A_V} \cong \frac{3.1 + 0.3(B - V)}{1 - 0.02 A_B} \quad (32b)$$

following Blanco (1956) and Johnson (1968). For the normal range of galaxy colors ($0.3 \leq (B - V) \leq 1.0$) at small z and near the galactic poles ($A_B = 0.2$), the denominator of (32a) is in the range $4.20 \leq (R + 1) \leq 4.41$; nearer the galactic plane R increases by 0.06 for each additional magnitude in A_B . With the adopted values of A_B (sect. 3.4,e) this formula predicts a color excess $E(B - V) \cong 0.046$ mag. near the galactic poles, in close agreement with the mean value $\langle E(B - V) \rangle = 0.054 \pm 0.004$ (m.e.) derived by Holmberg (1974) from a careful re-evaluation of the best determinations by several methods (see also Heiles 1975).

The differential extinction in $(U - B)$ was calculated from $E(B - V)$ as

$$E(U - B) = X E(B - V) \quad (33a)$$

where

$$X = 0.72 \quad \text{for } (B - V)_0 \leq 0.60$$

and

$$X = (B - V)_0 + 0.12 \quad \text{for } (B - V)_0 \geq 0.60 \quad (33b)$$

with

$$(B - V)_0 = (B - V) - E(B - V)$$

following the precepts of Racine (1973), adapted to the case of galaxies by substituting $(B - V)_0$ for spectral type (de Vaucouleurs 1976). For the normal range of intrinsic galaxy colors, $0.3 \leq (B - V) \leq 1.0$, X is in the range $0.72 \leq X \leq 1.12$, that is, always larger than the “standard” value 0.72, but in agreement with the empirical average value $\langle X \rangle \cong 1.1$ (de Vaucouleurs 1961). Similar formulae were used to derive the differential internal extinction from $A_B(i)$.

The effect of redshift on the integrated color indices has been derived by Pence (1976) from the same spectral data used to calculate K_B (sect. 3.4,e). For small z the following linear approximations are adequate

$$K_{B-V}(z, T) = K_{B-V}(T) \cdot z = K'_{B-V}(T) \cdot cz \quad (34)$$

and

$$K_{U-B}(z, T) = K_{U-B}(T) \cdot z = K'_{U-B}(T) \cdot cz$$

where cz is the observed (heliocentric) velocity in km s^{-1} and

	$\frac{10^4 \cdot K'_{B-V}(T)}{0.095}$	$\frac{10^4 \cdot K'_{U-B}(T)}{-0.055}$
$T \leq 0$	0.095	-0.055
$0 \leq T \leq 3$	$0.095 - 0.010 T$	$-0.055 + 0.033 T$
$T \geq 3$	0.065	+0.045

The maximum corrections for $cz = 10^4 \text{ km s}^{-1}$ are less than 0.10 mag. for $T < 0$ and $\cong 0.07$ mag. for $T > 3$. Note that the effect of redshift on early type galaxies is to *decrease* the $(U - B)$ color index.

Then the corrected face-on total color indices of a galaxy are

$$(B - V)_T^0 = (B - V)_T - E_T(B - V) - K'_{B-V}(T) \cdot cz \quad (35)$$

and

$$(U - B)_T^0 = (U - B)_T - XE_T(B - V) - K'_{U-B}(T) \cdot cz$$

with

$$E_T(B - V) = \frac{A_B + \alpha(T) \log R_{2.5}}{R + 1}$$

where A_B and $\alpha(T)$ are from sect. 3.4, e and R is calculated through eq. (32b).

Corrected face-on color indices are listed for 953 galaxies in $(B - V)$ and 583 in $(U - B)$ or 21.9 and 13.4 per cent of the catalogue; corrected colors could not be calculated for 307 and 228 objects which have total colors in columns 19, 20 but no redshift data.

3.6 Radio Continuum Flux and Spectral Indices

a) Mean continuum flux density $\log S_R$ at $\nu_R = 1400$ MHz (Column 24, lines 1, 2)

A working list of all radio continuum sources identified with bright galaxies ($m < 15$) or previously reported as possible coincidences was prepared in 1970–1971 beginning with Dixon's (1970) original "Master List." This was supplemented by searches through all the major surveys of bright galaxies as radio sources (Heeschen and Wade 1964; Heeschen 1970 a,b; Cameron and Glanfield 1968; de la Beaujardière *et al.* 1968; Cameron 1971; Tovmassian 1966, 1968) and the systematic zone surveys at Bologna, Cambridge, Green Bank, Molonglo, Ohio State, Owens Valley, Parkes, and elsewhere. Finally the lists of radio galaxies with measured redshifts (Moffet 1973), the catalogue of extragalactic radio source identifications (Véron 1974), and the unpublished updated version of Dixon's "Master List" made available by UTRAO were consulted for verification and additional information. Altogether about 100 original papers were examined in addition to the major references above. Since extensive lists of references have already been given in the Dixon and Véron catalogues, no detailed bibliography will be given here.

A critical review of the data was made to remove all known misidentifications, e.g., with nearby quasars, and to reject aberrant or incomplete flux data, in particular for large galaxies partly resolved by the antenna beam at the higher frequencies. The data were compiled, checked, and updated independently by 3 different individuals in 1971, 1973, and 1975. For each galaxy identified with a radio source, a plot of log flux density $\log S_\nu$ versus log frequency $\log \nu$ was made for all known observations in the frequency range of 10^2 to 10^4 MHz. In most cases, the scatter is so large that the spectrum can be adequately represented by two segments of straight lines intersecting near 1400 MHz (the rare instances of anomalous or "curved spectrum" are recorded in the Notes). By analogy with the optical case the energy distribution was, therefore, characterized in a first approximation by one standard "magnitude" and two "color indices"; we chose 1400 MHz as the standard frequency ν_R for the radio continuum flux S_R . The values of $\log S_R$ given in Column 24 (line 1) in hundredths of Jansky units to avoid negative entries ($0.01 \text{ Jy} = 10^{-28} \text{ Wm}^{-2} \text{ Hz}^{-1}$) are the unweighted averages of all available measurements in the 1400 to 1420 MHz range. The number N_R of observations in this range is shown by the middle block of 2 digits on line 2. Where no data exist at 1400 MHz but observations are available at both lower and higher frequencies, an approximate value of $\log S_R$ was derived by linear interpolation. Such values are identified by a \$ sign attached to $\log S_R$ and by a 0 in the N_R column on line 2. An * indicates $N_R \geq 1$

but an uncertain S_R due to unusually large scatter or very low flux. (S_R values < 0.05 Jy were rejected.)

A total of 270 values of $\log S_R$ are listed (6.2 per cent of catalogue). When a close pair was in the beam, the flux is entered under the optically brighter or larger galaxy and a + sign is entered under the secondary object.

We have not attempted to attach calculated mean errors to $\log S_R$ values, but an average mean error of $\cong 0.10/\sqrt{n_R}$ is indicated for sources stronger than 0.1 Jy, i.e., $\log S_R > 1$.

b) Mean spectral indices α_- , α_+ at $\nu < \nu_R$ and $\nu > \nu_R$ (Column 25, lines 1, 2)

The slopes α_- and α_+ of the best fitting straight lines approximating the radio spectral energy distribution in the $\log S - \log \nu$ diagram for $\nu < \nu_R$ and $\nu > \nu_R$ and passing through the adopted mean point at ν_R (Fig. 7), i.e., the coefficient α in

$$\log (S/S_R) = -\alpha \log (\nu/\nu_R), \quad (37)$$

define the mean spectral indices at frequencies respectively lower and higher than ν_R . The

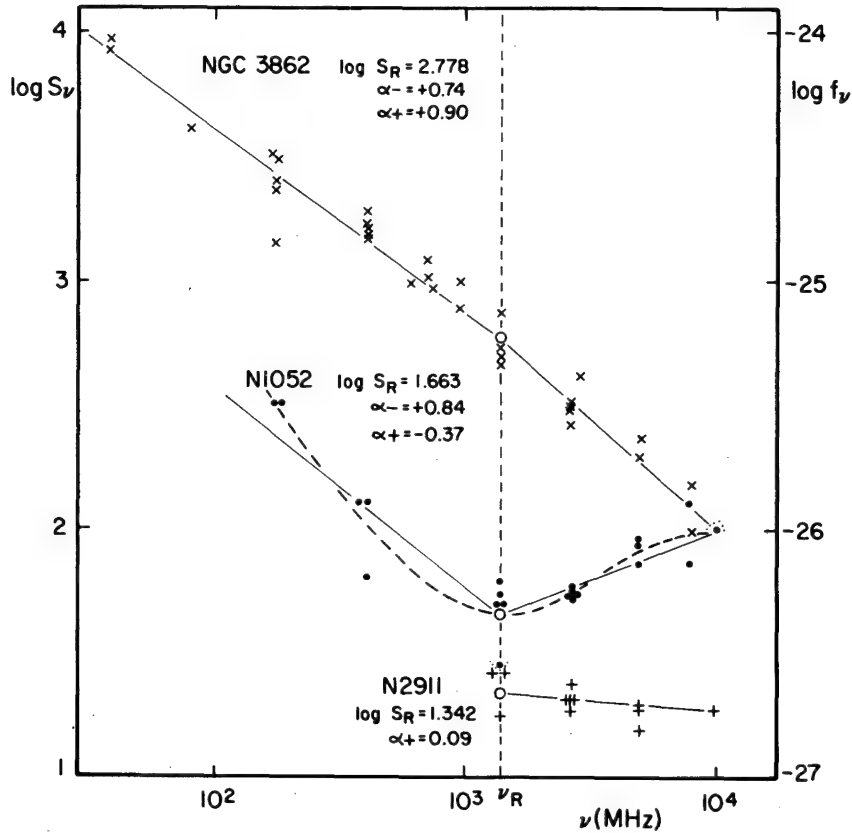


Fig. 7. Examples of spectral energy distribution in the radio continuum: $\log f_\nu = \log S_\nu - 28$ vs. frequency ν (f_ν in $\text{Wm}^{-2} \text{Hz}^{-1}$, ν in MHz).

Top: NGC 3862, strong normal radio spectrum well approximated by two spectral indices and mean flux at $\nu_R = 1410$ MHz (circle).

Center: NGC 1052, source with abnormal (curved) spectrum poorly approximated by mean flux and two spectral indices ($\alpha_+ < 0$).

Bottom: NGC 2911, weak source with flat spectrum observed only at $\nu \geq \nu_R$.

best fit was not determined by least squares, but by graphical procedures allowing for the scatter of the data points, resolution effects (at higher frequencies), continuity and estimated relative reliability of various data sets. Aberrant points were freely rejected as seemed appropriate, especially for the weaker sources near the detection limit of many surveys.

Spectral indices α_- and α_+ are given for 253 galaxies from 1080 observations at $\nu < \nu_R$, and for 239 galaxies from 880 observations at $\nu > \nu_R$. The number of observations used in each interval for each galaxy is shown by the first and third blocks of 2 digits in Column 24, line 2. No formal estimate of the mean errors in α_- and α_+ can be given, but a judgment of reliability depending on number of observations, spectral range covered and scatter was made in each case; uncertain values are marked *, very uncertain values by \$.

When the representation of the spectral energy curve by two straight lines is not good ("curved spectrum"), α is followed by * or \$ and this is indicated in the Notes.

c) Radio magnitude m_R and corrected radio index RI (Column 27, line 1)

In order to facilitate radio-optical comparisons we have calculated a radio magnitude m_R , as originally defined by Hanbury Brown and Hazard (1961),

$$m_R = 11.6 - 2.5 \log (S_R/100) \quad (38)$$

where $\log (S_R/100)$ is the log radio continuum flux density in Jansky units, i.e., the value tabulated in Column 24 minus 2.

We redefine the (corrected) radio index as

$$RI = m_R^0 - B_T^0 \quad (39)$$

where B_T^0 is the corrected face-on magnitude from Column 18, line 2, and m_R^0 is the radio magnitude corrected for the effect of redshift

$$m_R^0 = m_R - 2.5 (\alpha - 1) \log (1 + z) \quad (40)$$

For small redshifts ($z < 0.04$) this reduces to

$$\begin{aligned} m_R^0 &= m_R - 1.087 (\alpha_R - 1) \cdot z \\ &= m_R - 3.63 \cdot 10^{-6} (\alpha_R - 1) \cdot cz \end{aligned} \quad (41)$$

where $\alpha_R = (\alpha_+ + \alpha_-)/2$ is the mean spectral index near $\nu = \nu_R$ and cz is the radial velocity in km s^{-1} .

Since, with few exceptions, $0 < \alpha_R < 1$, the maximum correction for $cz = 10^4 \text{ km s}^{-1}$ is $< 0.04 \text{ mag.}$

The corrected radio index is listed for 174 galaxies or 65 per cent of those for which $\log S_R$ is given in Column 25. The radio magnitudes (not listed) range from $\cong 4$ (NGC 5128 = Cen A, $m_R = 3.79$; LMC = A0524, $m_R = 4.62$) to $\cong 14$ and the radio indices from about -4.2 for the brightest radio galaxies (3C88, 3C75, N7236-37) to about $+5.0$ for the weakest detected galaxies (N55, N598, N3368). An analysis of radio index distribution among optically bright galaxies will be presented elsewhere.

3.7 Neutral Hydrogen Fluxes

a) Mean HI emission line flux density $\log S_H$ and mean error (Column 26, lines 1, 2)

All measurements of the 21 cm emission line flux densities F_H , expressed in units of 10^6 solar masses per Mpc^2 , were collected between 1970 and 1975, beginning with the compilation of 92 galaxies in $H^2 V$ (1971, Table VIII, p. 100) supplemented by the updated lists of Balkowski (1973), Durand (1974), and Gouguenheim (1975). This working list was revised, enlarged, and corrected several times by reference to the original publications, augmented

by a prepublication copy of the survey of DDO dwarfs by Fisher and Tully (1975). Discrepancies, scale errors, erroneous identifications were resolved as far as possible by direct correspondence with the authors of the original observations; in particular the early observations from Nançay (Gouguenheim 1969) were corrected by $\times 1.3$ to remove the well-established calibration error of the first Nançay receiver (cf. H²V 1971, p. 95; Gouguenheim 1975). Some marginal or doubtful observations (quality C or D in Nançay notation) were rejected. Where the published flux densities or hydrogen masses had been corrected for self-absorption, the original observed flux densities were recalculated; the only corrections accepted were for beam width and calibration errors. Where published 21 cm line strengths had been expressed in other units, such as $\text{Jy} \times (\text{km s}^{-1})$ or in solar masses for an assumed distance, they were reconverted to the conventional units $F_{\text{H}}(10^6 \mathfrak{M}_{\odot} \text{Mpc}^{-2})$ and finally to energy units $S_{\text{H}}(\text{Wm}^{-2})$.

The values of $\log S_{\text{H}}$ listed in Column 26, line 1 are the unweighted averages of all non-rejected independent measurements in units of 10^{-28} Wm^{-2} ; the number n_{H} of observations used is shown on line 2. A list of sources of 21 cm data is given in Table 14 where N_{S} is the number of HI flux values from each source. The original sources for each object are listed in Appendix H, and the references in Sect. R.IV (p. 66).

The relation between S_{H} in 10^{-28} Wm^{-2} and F_{H} in $10^6 \mathfrak{M}_{\odot} \text{Mpc}^{-2}$ is

$$\begin{aligned} F_{\text{H}} &= 4.970 \cdot 10^{27} (S_{\text{H}}/10^{28}) = 0.497 S_{\text{H}} \\ \text{or} \quad \log F_{\text{H}} &= \log S_{\text{H}} - 0.304 \end{aligned} \quad (42)$$

after H²V (1971, p. 97). Hence the apparent total mass of neutral hydrogen \mathfrak{M}_{H} in a galaxy is given, in solar units, by

$$\log (\mathfrak{M}_{\text{H}}/\mathfrak{M}_{\odot}) = \log F_{\text{H}} + 2 \log \Delta + 6 = \log S_{\text{H}} + 2 \log \Delta + 5.696 \quad (43)$$

if the distance Δ is in megaparsecs. The true total mass, corrected for self-absorption A_{21} , is derived as explained in sect. 3.7,b.

Mean HI emission line flux densities S_{H} derived from a total of 632 observations are listed for 474 galaxies or 10.9 per cent of the catalogue; a \$ indicates unresolved discrepancies in excess of 0.2 in $\log S_{\text{H}}$ between independent observations or the existence of a marginal detection, e.g., Nançay D quality data (see Notes). When two nearby galaxies were in the antenna beam, the flux was assigned to the brighter one and a + sign in Column 25, line 1 for the other galaxy calls attention to this fact; when both galaxies are about equal, the flux is listed for the unresolved pair, e.g., N4038. refers to the unresolved N4038-N4039 system (cf. sect. 2, Column 1). A preliminary error analysis of 100 multiply observed objects suggests an average mean error of 0.08 in $\log S_{\text{H}}$ per observation, independent of source (after corrections and rejections). Hence the mean error of the $\log S_{\text{H}}$ values may be taken as $0.08/\sqrt{n_{\text{H}}}$ with an average of 0.07 (range 0.08 to 0.03).

b) Corrected 21 cm line magnitude m_{21}^0 and neutral hydrogen index $\text{HI} = m_{21}^0 - B_{\text{T}}^0$
(Column 27, line 2)

By analogy with the radio magnitude measure of the continuum flux (sect. 3.6,c) and to facilitate hydrogen line-continuum-optical comparisons, we define a 21 cm line magnitude corrected for self-absorption

$$m_{21}^0 = m_{21} - 2.5 A_{21}(i) = 16.6 - 2.5 \log S_{\text{H}} - 2.5 A_{21}(i) \quad (44)$$

where $A_{21}(i)$ is the self-absorption at inclination i

$$A_{21}(i) = \log [S_{\text{H}}(0,0)/S_{\text{H}}(i,\kappa)] = \log \frac{\kappa}{1 - e^{-\kappa}} \quad (45)$$

and the effective optical depth κ is given by

$$\kappa = \kappa_0^*/\cos i = 0.031/\cos i \quad (46)$$

after H² V (1971, p. 96 and Table X, p. 102). The values of i were taken from Table VIII of H² V or calculated from the $\log R$ and $q_0(T)$ values listed in BGC, following the precepts of H² V (p. 87). The validity of eq. (45) with the adopted value of κ_0^* has been verified on a larger sample by Balkowski (1973). Hence the true total mass of atomic neutral hydrogen in a galaxy is given by eq. (43) increased by A_{21} . The values of A_{21} are listed after n_H in Column 26, line 2.

The neutral hydrogen index HI is defined as

$$HI = m_{21}^0 - B_T^0 \quad (47)$$

where B_T^0 is from Column 18, line 2.

The hydrogen to continuum radio index may be calculated as

$$HR = HI - RI = m_{21}^0 - m_R^0 = 5.00 - 2.5 \log (S_H^0/S_R^0) \quad (48)$$

This index measures the strength of the 21 cm emission line in terms of the nearby radio continuum, that is the (corrected) "equivalent width" of the line

$$\log EW_{21} = \log S_H^0 - \log S_R^0$$

where $\log S_H^0 = \log S_H + A_{21}$ and $\log S_R^0$ is given by eq. (38) and (41).

Values of HI are listed for 240 galaxies, of which 62 have also a radio index RI (line 1). An analysis of the 3 ratios radio continuum - 21 cm line emission - optical B flux of bright galaxies will be presented elsewhere.

3.8 Radial Velocities

The rapid growth in the number of optical and, especially, 21 cm line redshifts since 1964 has made it possible to set up radial velocity systems that are substantially free of systematic errors and to establish more reliable weighting systems. In particular it was found possible to define independently optical and radio velocity systems that are in systematic agreement within 10 km s⁻¹ or less at all redshifts. This procedure is more satisfactory than force-fitting the optical data to the radio systems by empirical corrections. The radial velocities listed in Column 28 are weighted means of all radio and optical determinations combined.

a) Optical redshifts and weights

In addition to the investigations of Holmberg (1961), Page (1961), and G. and A de Vaucouleurs (1963) already used in the original BGC, systematic and accidental errors of optical redshift measurements have been discussed by Roberts (1972), Lewis (1975), and independently by the present authors. A working list of all published and many unpublished velocities, including preprints of the ScI surveys by Rubin and Ford (1976) and Sandage and Tammann (1975) and of the Shapley-Ames survey by Sandage (1975), was prepared and several times revised, enlarged, and corrected between 1970 and 1975. Discrepant velocities, misidentifications, etc. were clarified as far as possible by correspondence with the original observers or from internal evidence.

A preliminary mean velocity system was set up for 614 galaxies with 2 or more independent velocity observations; clearly discrepant data were rejected, new unweighted mean velocities calculated and provisional mean zero point corrections and relative weights estimated. The process was repeated in a second approximation using the provisional weights to compute weighted mean velocities; plots of residuals vs velocity for all sources with 5 or more redshifts in common with others were examined for trends and scatter. Where a constant was

indicated, a new mean zero point correction was calculated; where two distinct groupings were indicated, each was treated separately; in particular, the velocities of 7 objects in Slipher's historical data (source A, NGC 1023, 4382, 4486, 4821, 5194, 5195, 7331) were rejected; their large residuals (in excess of -200 km s^{-1}) were almost entirely responsible for the zero point correction of $+67 \text{ km s}^{-1}$ applied to the Flagstaff data in BGC (Table 12, footnote 1); actually, the other objects have negligible zero point error and a satisfactorily small scatter.

The major sources of redshifts with a systematic velocity dependence in the zero point were the two Lick lists with the Crossley spectrograph (sources C, 1956 and D, 1961); the origin of this systematic error is not clear, but possibly was caused by incorrect rest wavelengths for some lines (e.g., $H\beta$) and by the use of graphical methods in some phases of the reduction; in addition there is a systematic zero point shift of $\cong 25 \text{ km s}^{-1}$ between sources C and D, but otherwise the systematic trends are clearly parallel. The Crossley redshifts are the main contributors to the often mentioned "Roberts correction" (1972), but applying a constant correction of, say, -100 km s^{-1} in some fixed interval of velocities is not an adequate treatment (see also Lewis 1975).

In a third approximation sources C, D and others (sources E1, F, I, K1, K6, L1, M1, S2 and Z1) having unusually large systematic and accidental errors were rejected and new weighted mean velocities formed from all other sources without zero point correction. Systematic errors with respect to this 3rd approximation mean system were re-derived, new weights calculated and new weighted means calculated in a 4th approximation. As additional evidence (but for confirmation only) series C and D were also compared directly with radio (21 cm line) velocities and it was checked that the error and its variation with velocity is independent of morphological type, that is, of dominant spectral type. It was also established that sources A (Flagstaff) and B (Mt. Wilson) are in systematic agreement with radio velocities. Two more revisions of zero point corrections and weighting systems were carried out as more velocity data became available in 1975; the final corrections and mean errors adopted are listed in Table 13. Identification of sources and references are given in Appendix V and Sect. R.III, R.IV. The weights w or mean errors σ given with the published velocities are in general estimates of internal errors; these were assumed to be reliable as relative weights within each set, but required a scaling factor (occasionally < 1) to represent true (external) mean errors. The scaling factor f_σ was derived for all sources with sufficient overlap with others; then the true m.e. is $\sigma_c = \sigma \cdot f_\sigma$. In many cases only one source is available and there is no way to detect and reject aberrant observations, then the adopted m.e. σ_1 is that derived from analysis of residuals before rejection in the multiply-observed case. A total of 3433 optical redshifts were combined to derive the observed (heliocentric), weighted mean velocities of 2502 galaxies.

b) Radio redshifts and weights

Radial velocities defined as $V = c\Delta\lambda/\lambda_0$, as recommended by IAU Commissions 30 and 40 (1973), are generally available for all galaxies with detected 21 cm line emission (sect. 3.7). These were treated in a manner similar to the optical redshifts. Even though systematic errors are much smaller than in the optical case, small zero point corrections (up to 3 km s^{-1}) were indicated for some sources and scaling factors f_σ and mean errors σ_1 for single observations were derived as in the optical case. The adopted reduction constants are listed in Table 14.

Table 13. Reduction Constants and Mean Errors for Optical Redshifts*

Code	Source		N	n	Correction	σ_1	f_σ	Notes
A	Lowell	1925	40	33	0	125	0.4	(1)
B	Mt. Wilson	1956	566	206	0	58	1.0	
B1	Mt. Wilson	1965	1	-	(0)	(58)	(1.0)	as B
B2	Mt. Wilson	1969	6	-	(-55)	(185)	(1.07)	as K1
C	Lick 1	1956, 1960	311	147	$0 + F_1$ (V)	83	0.96	
D	Lick 2	1962	86	60	$+25 + F_1$ (V)	95	0.95	
D2	Lick 2	1966	2	-	$+25 + F_1$ (V)	(95)	(0.95)	as D
E1	McDonald 1	1970	70	24	$-50 + F_2$ (V)	95	0.50	(2)
F	McDonald 2	1959-1963	55	37	$-50 + F_2$ (V)	71	0.72	as E1
F1	McDonald 2	1963-1968	36	34	-15	56	0.67	
F2	McDonald 2	1964-1965	7	7	-35	35	0.51	
G	McDonald 3	1963	1	-	(+ 5)	(35)	(0.1)	as G1
G1	McDonald 3	1967	111	33	+ 5	35	1.0	
G2	McDonald 4	1975	1	-	(0)	(50)	(1.0)	
H	Mt. Stromlo	1961	11	8	+10	20	0.91	
I	Radcliffe	1952-1961	9	5	0	150	1.0	
J	Hte-Provence	1961	5	5	0	18	1.0	
J1	Hte-Provence	1965	12	12	+ 5	50	1.4	
J2	Hte-Provence	1965	3	3	(0)	(50)	(1.0)	
J3	Hte-Provence	1974-1975	22	-	(+5)	(18)	(1.0)	as J1
K	Mt. W-Palomar	1960-1963	27	12	0	68	0.71	
K1	Mt. W-Palomar	1964-1972	67	23	-55	185	1.07	
K2	Mt. W-Palomar	1965-1973	48	19	-15	86	0.73	
K3	Mt. W-Palomar	1968-1974	259	51	+25	105	0.60	
K4	Mt. W-Palomar	1973-1974	3	1	(0)	(50)	(1.0)	
K5	Mt. W-Palomar	1972-1974	2	1	(0)	(80)	(1.0)	
K6	Mt. W-Palomar	1963-1970	35	14	+10	120	0.84	
K7	Mt. W-Palomar	1966-1975	75	2	(0)	(40)	(1.0)	
K8	Mt. W-Palomar	1971	13	-	(+25)	(105)	(0.60)	as K3
K9	Mt. W-Palomar	1969	1	-	(0)	(40)	(1.0)	as K7

Code	Source		N	n	Correction	σ_1	f_σ	Notes
L	Mt. Stromlo	1964	19	11	0	55	0.87	
L1	Mt. Stromlo	1968-1974	33	10	+155	270	1.17	
L2	Mt. Stromlo	1970-1974	14	5	0	50	0.86	
L3	Mt. Stromlo	1972-1975	159	6	-10	35	0.74	
L4	ESO	1974	1	-	(0)	(40)	(1.0)	
M	Radcliffe	1963	34	17	-15	140	1.50	
M1	Radcliffe	1965-1969	22	9	-130	130	1.56	
M2	Radcliffe	1972-1974	11	5	+100	125	1.0	
M3	RGO	1972-1973	5	2	(0)	(50)	(1.0)	
N1	Córdoba	1967	12	5	+25	100	1.0	
N2	Córdoba	1966-1973	34	16	-55	180	1.4	
N3	Córdoba	1973	9	3	(-10)	(30)	(1.0)	
O1	Lick	1964-1972	21	13	-15	30	0.60	
O3	Lick	1968-1970	12	10	+35	70	0.42	
O4	Lick	1965-1968	5	4	(0)	(11)	(1.7)	
O5	Lick	1969-1974	5	3	(-10)	(12)	(1.0)	(3)
O6	Lick	1974	1	-	(0)	(30)	(1.0)	
P1	Hte. Provence	1969-1971	3	3	(0)	(16)	(1.0)	(4)
P2	Hte. Provence	1968-1970	5	5	+5	21	1.0	(4)
P3	Palomar	1971	1	1	(0)	(20)	(1.0)	(4)
P4	Córdoba	1969-1974	3	2	(0)	(40)	(1.0)	(4)
P5	KPNO	1972	1	1	(0)	(10)	(1.0)	(4)
Q1	Kyoto	1972-1973	3	1	(0)	(80)	(1.0)	
Q2	Asiago	1965-1974	9	6	(-40)	(45)	(1.0)	
S1	Cerro Tololo	1971-1974	3	2	(0)	(90)	(1.0)	
S2	Cerro Tololo	1972	11	7	-150	40	0.44	
S3	Cerro Tololo	1973-1974	6	-	(0)	(90)	(1.0)	as S1
S4	KPNO	1969-1974	117	25	0	150	1.33	
S5	KPNO	1971	61	19	+25	70	1.0	
S6	KPNO	1969-1974	46	14	0	150	0.88	
S7	KPNO	1969-1973	37	9	0	55	1.0	
S8	Cerro Tololo	1975	41	7	-10	100	1.04	
S9	Hawaii	1974	4	-	(0)	(55)	(1.0)	as S7

Code	Source		N	n	Correction	σ_1	f_σ	Notes
T1	DTM	1968-1969	3	3	(0)	(30)	(1.0)	
T2	DTM	1967-1973	40	27	+10	30	0.75	
T3	DTM	1969	4	2	(-70)	(50)	(1.0)	
T4	DTM	1975	177	-	(0)	(30)	(1.0)	
U1	McDonald	1970-1973	3	3	(0)	(35)	(1.0)	(5)
U2	McDonald	1971-1975	46	21	0	120	0.92	
U3	McDonald	1968-1970	33	14	-15	95	0.81	(5)
U4	McDonald	1971-1975	26	8	- 5	30	0.75	(6)
U5	McDonald	1969-1971	10	1	(0)	(80)	(1.0)	(5)
U6	KPNO	1973-1975	8	-	(0)	(150)	(0.88)	
U7	McDonald	1967	9	2	(0)	(165)	(1.0)	(5)
U8	McDonald	1974	4	-	(0)	(120)	(0.92)	(6) as U2
U9	McDonald	1975	14	-	(0)	(120)	(0.92)	(6) as U2
V1	Palomar	1972-1973	5	5	(0)	(10)	(0.5)	(7)
V2	McDonald	1967	11	11	+10	40	(1.51)	(8)
V3	Cerro Tololo	1972	2	1	(0)	(30)	(1.0)	(9)
V4	KPNO	1972	1	1	(0)	(30)	(1.0)	(10)
X1	Dearborn	1972	1	1	(0)	(100)	(1.0)	
X2	Steward	1972-1974	4	-	(+10)	(90)	(1.0)	as X3
X3	Steward	1971-1973	13	12	+10	90	1.0	
X4	Steward	1971-1973	34	8	+40	120	0.72	
Z1	Byurakan	1968-1973	256	110	+120 + F_3 (V)	220	0.77	
Z2	Alma-Ata	1971-1974	137	-	(0)	(100)	(0.8)	
Z3	Crimea	1973-1974	45	-	(0)	(200)	(1.0)	

Notes:

* References, section R.III and Appendix V.

N = total number of velocities in source.

n = number of velocities in common with other sources and used to derive correction, σ_1 and f_σ .

σ_1 = mean error assigned to velocities given without stated mean error in source.

f_σ = factor by which mean error stated in source is multiplied to reduce them to proper weighting system.

() = values adopted for sources with too few velocities in common with other sources (or received too late for statistical evaluation).

$F_1(V) = 0$ for $V < +1000$ and $V > 3100$,

$= -0.2(V-1000)$ for $1000 \leq V \leq 1700$,

$= +0.1(V-1700)$ for $1700 \leq V \leq 3100$.

$F_2(V) = +100(1-10^{-0.3 V/V_0})$ with $V_0 = 1600$.

$F_3(V) = -200(1-10^{-0.3 V/V_0})$ with $V_0 = 2500$.

(1) 7 galaxies rejected (see text). (2) Replaces original source E. (3) Coudé spectro.

(4) Fabry-Perot interferometer. (5) Meinel spectro. (6) UVITS. (7) Vidicon. (8) Cass. Scanner. (9) Fabry-Perot pressure scanner. (10) correlation method.

Table 14. Reduction Constants and Mean Errors for Radio Redshifts*

Code	Source		N	n	Correction	σ_1	f_σ	N_S
R	BGC, H ² V	1964-1971	25	21	- 3	18	0.80	26
R1	NRAO	1965-1975	253	36	- 3	18	1.0	118
R2	Nançay	1969-1975	242	54	0	30	0.86	197
R3	Owens Valley	1967-1974	45	33	+1	10	1.0	12
R4	Jodrell Bank	1966-1975	72	27	+3	30	1.30	74
R5	Parkes	1965-1975	21	9	0	25	0.69	15
R6	NRAO	1975	196	25	+1	10	1.0	190
R7	Ohio	1966	2	2	(0)	(20)	(1.0)	0
R8	Cambridge	1973-1974	2	1	(0)	(20)	(1.0)	0
R9	Westerbork	1974	2	0	(0)	(20)	(1.0)	0

* References in section R.IV and Appendix V.

Notes: see Notes to Table 13. N_S = Number of flux values in source.

A total of 810 radio redshifts were combined to derive the observed weighted mean velocities of 618 galaxies. No weight $w = (10/\sigma)^2$ was allowed to exceed 100; that is, a minimum mean error $\sigma_1 = 10 \text{ km s}^{-1}$ was assigned to single observations, irrespective of the published estimated errors (we found many cases of radio velocities with estimated errors $< 5 \text{ km s}^{-1}$ differing by 10 to 20 km s^{-1} or more). The 21 cm line velocities associated with rejected HI flux values were also rejected in most instances, even when they were not in conspicuous disagreement with other determinations.

A comparison of mean radio and optical velocities for 221 galaxies in common shows that the two systems are in excellent systematic agreement at all velocities (Fig. 8); only 21 objects have residuals $\delta V = V(\text{opt}) - V(\text{rad.})$ in excess of 150 km s^{-1} .

The standard deviation $\sigma(\delta V)$ for the others increases slowly with V , roughly as $\sigma(\delta V) \cong 40 + 10^{-2} V (\text{km s}^{-1})$.

c) Mean observed velocities V and mean errors (Column 28, lines 1, 2)

The observed (heliocentric) systemic velocities $V = c\Delta\lambda/\lambda_0$ listed in column 28, line 1 are the weighted means of all optical and radio determinations corrected for zero point and systematic error as explained above and weighted as shown in Tables 13 and 14. Velocities of individual structural details, such as HII regions, possibly affected by rotation and other peculiar motions were not used in computing V , but are referenced in the Notes.

A total of 2713 velocities or 62.2 per cent of the catalogue are listed in Column 28 of which 911 are means from 2 or more observations and 1802 are from single observations all reduced to the same mean system. The numbers $N_R + N_O$ of Radio and Optical observations used in computing the mean velocity are shown by the first two or three digits ($N_R < 10$, $N_O \leq 10$) on line 2, followed by the mean error (in km s^{-1}) of the mean velocity given by $\sigma_W = (100/W)^{1/2}$, where $W = \Sigma w$ is the total weight. The average mean error of the mean velocities is 67 km s^{-1} (range 3 to 300).

The velocities of 95 galaxies with discrepant optical velocities (range $\geq 200 \text{ km s}^{-1}$)

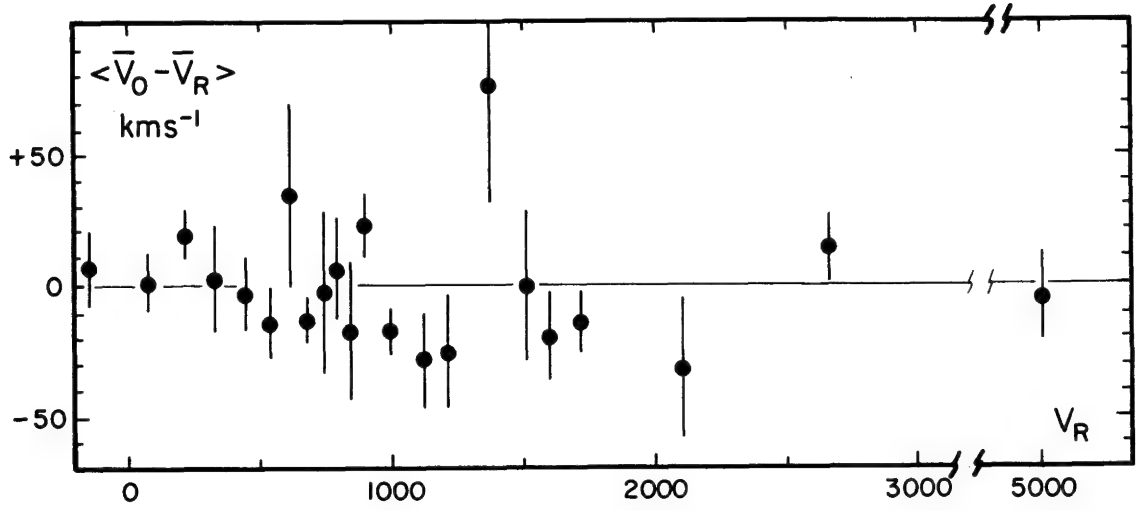


Fig. 8. Mean differences between independently derived mean optical and mean radio (21 cm) velocities $\overline{V}_O - \overline{V}_R$ as a function of V_R . Points are means of groups of 50 galaxies in order of increasing V_R ; half-length of errors bars is $\pm 1\sigma$. There is no evidence of systematic differences in excess of $\pm 10 \text{ km s}^{-1}$. No residual is in excess of $\pm 2\sigma$.

and of 51 galaxies with $\delta V (\text{opt.} - \text{rad.}) \geq 100 \text{ km s}^{-1}$ are followed by an *. Only 3 galaxies (N520, N2613, and I2184) are in common. For these 143 objects the listed mean velocities are probably less precise than the calculated mean errors suggest.

For the Magellanic Clouds we derived from optical and radio data the mean velocities observed near the optical centers C of the axial bars which coincide more closely with the centers of mass than other distribution centroids (de Vaucouleurs and Freeman 1972). For the LMC, $V_c(5^{\text{h}}24, -69^{\circ}.8) = +260 \pm 5$ from 2 sets of optical data (de Vaucouleurs 1960; Feast 1964) and 2 sets of radio data (Kerr and de Vaucouleurs 1955; McGee and Milton 1965). For the SMC, $V_c(0^{\text{h}}51, -73^{\circ}.1) = +150 \pm 5$ from 2 sets of optical data (Feast 1968, 1970) and 2 sets of radio data (Kerr and de Vaucouleurs 1955; Hindman 1967).

Note on radial velocities: The “Doppler shifts” $V = cz$ listed in Column 28 are pseudo-velocities related to the true relativistic velocities v through

$$1 + z = \left(\frac{1 + \beta}{1 - \beta} \right)^{1/2}$$

where $\beta = v/c$. Hence $V > v$ with

$$V - v = 15 \times 10^4 z^2 \quad (\text{km s}^{-1})$$

$$\text{or} \quad z - \beta = 0.5 z^2$$

For example, $cz - v = +15 \text{ km s}^{-1}$ at $cz = 3,000 \text{ km s}^{-1}$ and $+375 \text{ km s}^{-1}$ at $cz = 15,000 \text{ km s}^{-1}$.

d) Solar motion correction ΔV and corrected velocities V_0 (Column 29, lines 1, 2)

In the BGC the solar motion correction

$$\Delta V = 300 \cos A \quad (49)$$

was calculated for a solar apex at $\ell^I = 57^\circ$, $b^I = 0^\circ$, after Humason and Wahlquist (1955) and Humason, Mayall, and Sandage (1956).

However, in order to be consistent with the 1958 IAU re-definition of galactic coordinates we have adopted for the solar apex $\ell^{II} = 90^\circ$, $b^{II} = 0^\circ$, following Sandage and Tammann (1975). The maximum difference between the old and the new correction is 14 km s^{-1} which is well within the approximation involved by eq. (49) since the best estimate of the total solar motion with respect to the velocity centroid of the Local group is $V = 315 \pm 15 \text{ km s}^{-1}$ toward $\ell = 95^\circ \pm 6^\circ$, $b = -8^\circ \pm 3^\circ$ (de Vaucouleurs and Peters 1968).

The corrected velocities listed in Column 29, line 1 are

$$V_0 = V + \Delta V$$

where

$$\Delta V = 300 \cos A = 300 \sin \ell \cos b \quad (50)$$

is given on line 2 for all catalogued objects.

Corrected velocities V_0 are listed for 2713 galaxies; only 15 are negative (smallest IC 3258, $V_0 = -517 \text{ km s}^{-1}$) and 13 are in excess of $14,000 \text{ km s}^{-1}$ (largest A1855+37, $V_0 = +16828 \text{ km s}^{-1}$).

3.9 *References to Sources and Notes* (Column 30, line 1)

The letters P, S, T refer to Appendices described in Section 4.

4. EXPLANATION OF NOTES AND APPENDICES

4.1 The Notes to the catalogue collect all information not presentable in tabular form, without unnecessary duplication of information already given in the Notes of the original Reference Catalogue; in particular all descriptions and bibliographical references prior to 1964 are not repeated, unless corrections or additions are needed.

Bibliographical references are classified under the following general headings: (1) Identification, corrections to BGC, membership in pairs, groups, clusters, and general remarks; (2) Description, classification, dimensions; (3) Special photographs (not in Appendix P); (4) Photometry (including UV and IR), isophotometry, colorimetry; (5) Spectroscopy, internal motions, velocity dispersion, redshift; (6) Spectrophotometry, line intensities, stellar population models; (7) Polarisation; (8) Dynamics, rotation, mass; (9) HII regions; (10) Optical interferometry; (11) Supernovae; (12) HI line emission; (13) Radio continuum emission; (14) X-ray emission.

The bibliography is substantially complete to January 1, 1975. Reviews and semi-popular papers and books were included only occasionally. For the Magellanic Clouds, only the more recent and complete surveys, symposia, and review papers are listed (under SMC = A0051-73) in which complete references to earlier papers are given. Abbreviations are listed in Table 15.

Table 15. Abbreviations

abs.	absorption		
anom.	anomalous	L	large
anon.	anonymous		
asym.	asymmetrical	m	much (or many)
att.	attached	M	middle (or in the middle)
		mag.	magnitude
B	bright	mark.	markings
bet.	between	matt.	matter
branch.	branching (or branches)	Mk	Markarian No.
br.	brightness		
		n	north
C	compact	N	nucleus
cent.	center or central	narr.	narrow
class.	classification	nf	north-following
cl.	cluster	np	north-preceding
coll.	colliding		
coord.	coordinates	obj.	object
comp.	component (or companion)	out.	outer
compl.	complex		
condens.	condensation (or condensed)	p	preceding
corr.	correction or corrected	part.	partly
		patt.	pattern
dbl	double	pec.	peculiar
def.	defined	poor.	poorly
diff.	diffuse	prob.	probably
desc.	description	p.w.	pair with
dim.	dimensions	P(a)	non-interacting pair
dist.	distance	P(b)	interacting pair
dk	dark	P(c)	colliding or strongly interacting pair
e	extremely	(r)	inner ring
elong.	elongated	(R)	outer ring
emiss.	emission	reg.	region (or regular)
envel.	envelope	rej.	rejected
extens.	extensions	res.	resolved (or resolution)
		resid.	residual
f	following		
F	faint	s	small (in description), or south
filam.	filamentary	sf	south-following
		sp	south-preceding
gal.	galaxy (or galaxies)	sev.	several
glob.	globular	sh.	short
		spir.	spiral
Heid. 9	Heidelberg Veröff., vol. 9, 1926	struct.	structure
Ho	Holmberg (Pair No.)	SN	supernova
hexag.	hexagonal	superp.	superposed
		surf.	surface
identif.	identification (or identified)		
inv.	involved	VV	Vorontsov-Velyaminov
irreg.	irregular	v	very
isol.	isolated	vel.	velocity
K	Karachentsev (Pair No.)		

w	with
Zw	Zwicky
*	star
DI	Dreyer's Corr. in NGC
DII	Dreyer's Corr. in IC I
DIII	Dreyer's Corr. in IC II
DIV	Dreyer's Corr. in M.N., 73, 37, 1912.
DDO	D. Dunlap Obs. (dwarfs)
CSCG	Zwicky's Catalogue of Selected compact galaxies (1971).
PSS	Palomar Sky Survey (charts).

Finding List of Messier Objects and Named Galaxies

Messier catalogue numbers are listed in Table 16a with their NGC identifications. Some unnumbered galaxies with traditional names are identified in Table 16b. The Capricorn system A2143-21 included in BGC as possible dE system is probably a remote galactic globular cluster and was rejected from the present catalogue.

Table 16a. Finding List of Messier Objects

Messier No.	NGC No.	Messier No.	NGC No.
31	224	83	5236
32	221	84	4374
33	598	85	4382
49	4472	86	4406
51	5194	87	4486
58	4579	88	4501
59	4621	89	4552
60	4649	90	4569
61	4303	94	4736
63	5055	95	3351
64	4826	96	3368
65	3623	98	4192
66	3627	99	4254
74	628	100	4321
77	1068	101	5457
81	3031	102	5866?
82	3034	104	4594

Table 16b. Finding List of Named Galaxies

Name	No.	Remarks
Large Magellanic Cloud	A0524-69	
Small Magellanic Cloud	A0051-73	
Cen A	N5128	
Circinus galaxy	A1409-65	
Draco dwarf = DDO 208	A1719+57	
Fornax system	A0237-34	
For A	N1316	
Hya A	A0915-11	V > 15,000
Leo A = DDO 69	A0956+30	Zwicky (1941)
Leo I = Regulus syst. = DDO 74	A1005+12	Harrington-Wilson No. 1 (1950) = A1006 in BGC.
Leo II = Leo B = DDO 93	A1110+22	Harrington-Wilson No. 2 (1950) = A1111 in BGC.
Peg dwarf = DDO 216	A2326+14	
Per A	N1275	
Sculptor System	A0057-33	A0058 in BGC
Sextans A = DDO 75	A1008-04	Zwicky (1942) = A1009 in BGC.
Sextans B = DDO 70	A0957+05	
UMi dwarf = DDO 199	A1508+67	
Copeland Septet	N3745-54	
Fath 703	A1511-15	
GR8 = DDO 155	A1256+14	
Hardcastle nebula	A1310-32	
Holmberg I = DDO 63	A0936+71	Zwicky (1942)
Holmberg II = DDO 50	A0813+70	A0814 in BGC
Holmberg III	A0909+74	
Holmberg IV = DDO 185	A1352+74	A1353 in BGC
Holmberg V	A1338+54	
Holmberg VI	N1325A	
Holmberg VII = DDO 137	A1232+06	
Holmberg VIII = DDO 166	A1310+36	A1311 in BGC
Holmberg IX = DDO 66	A0953+69	
Maffei I	A0232+59	
Maffei II	A0238+59	
Mayall's nebula	A1101+41	
Reinmuth 80	N4517A	
Seyfert Sextet	N6027A-D	
Stephan Quintet	N7317-20	
Wild Triplet	A1144-03	
Wolf-Lundmark-Melotte neb.	A2359-15	= DDO 221
Zwicky No. 2 = DDO 105	A1155+38	
Zwicky Triplet	A1648+45	

4.2 The Appendices give the following information:

APPENDIX A. Identification of A objects in MCG, UGC, and BGC.

Identification of "anonymous" galaxies (A objects) that have a designation in the *Morphologicheskii Katalog Galaktik* (MCG: Vorontsov-Velyaminov *et al.* 1962-1974) and in the *Uppsala General Catalogue* (UGC: Nilson 1973) are listed in Appendix A for 917 objects. Galaxies listed in the UGC supplement (1974) have their UGC designation preceded by an "A." UGC designations followed by an asterisk identify galaxies referenced in the UGC Notes for the UGC number given. Identifications with A numbers in original BGC are also given (note occasional changes).

APPENDIX F. Finding lists of Arp, Markarian, and Vorontsov-Velyaminov peculiar or interacting galaxies.

Table F1 is a list of RBGC galaxies illustrated in Arp's *Atlas of Peculiar Galaxies* (1966).

Table F2 is a list of RBGC galaxies illustrated in Vorontsov-Velyaminov's *Atlas and Catalogue of Interacting Galaxies* (1959).

Table F3 is a list of RBGC galaxies which have a number and finding chart in Markarian's seven lists of "Galaxies with Ultra-Violet Continuum" (1967-1974).

APPENDIX H. Sources of HI flux and velocity data

Identification by alphanumeric code (Table 14) of sources of HI flux, many of which include also velocity data (Columns 25, 28) is given for 474 galaxies in Appendix H. Individual papers under each code are listed in References, section R.IV. Sources of 21 cm velocities are also listed in Appendix V.

APPENDIX I. Finding list of IC objects

A finding list of 404 IC objects in numerical order is given in Appendix I.

APPENDIX M. Sources of magnitude and color data

Identification by 1- or 2- letter codes (Tables 10, 11) of sources of B magnitudes and B - V, U - B color data (Columns 16, 19, 20) for 1659 galaxies is given in Appendix M (including fragmentary photometry insufficient to derive asymptotic magnitudes and colors signaled by an * in Columns 16-20). Individual papers under each code are listed in References, section R.II.

APPENDIX P. Sources of photographs

References to photographs of 834 RBGC galaxies published in 18 atlases and major surveys are listed in order of right ascension in Appendix P. Sources are coded as shown in Table P1 (p. 369) where references are also given. Additional references to photographs in individual papers may be found in the Notes.

APPENDIX R. Radio sources identified with bright galaxies

A list of 200 RBGC galaxies identified with numbered radio sources in several major catalogues or surveys is given in Appendix R. Only a few additional references are given to supplement the Vérons' "Catalogue of Extragalactic Radiosource Identifications" (1974).

APPENDIX S. Galaxies with supernovae

A list of 217 RBGC galaxies in which 250 supernovae have been observed is given in Appendix S. Only SN listed as confirmed in the Palomar tabulations (Kowal and Sargent

1971; Sargent, Searle, and Kowal 1974) are included; additional objects reported in 1974 and 1975 are also listed with their provisional designations.

APPENDIX T. Hubble-Sandage and Hubble-Holmberg types

Types of 354 galaxies in the Hubble Atlas system after Sandage (1961, 1975) and of 300 galaxies in a slightly revised Hubble system after Holmberg (1958) are listed in Appendix T for a total of 566 galaxies. The types are numerically coded as shown in Tables T1 and T2 (p. 00) after de Vaucouleurs (1963).

APPENDIX V. Sources of radio and optical radial velocities

Identification by alphanumeric code (Table 13) of sources of radio and optical radial velocity data (Column 28) for galaxies is given in Appendix V. Individual papers under each code are listed in References, section R.III, R.IV and codes in Tables V1, V2.

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CATALOGUE

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀₁ Log D ₀ (13)	Log A _e m.e. (14)	
A0001+21 MK334 15381	0 0.59 5.17 0.63	21 40.9 33.3 15 41.2	108.37 -39.54 106.33	315.0 17.5 308.9	.P..... S...2S/ 2S		P048N 1.6 P048C			1.08 .039 1.18	.13 .038 .54	1.05 1.08 1.06		
N7814	0 0.69 5.16 5.16	15 52.0 33.3 33.3	106.42 -45.18 16.4	309.1 16.4 308.1	.SAS2*/ S 2 .S..9..	2 9 9	P200V 4.6 P048F	SDP*K	2	1.80 .032 1.40	.38 .024 .13	1.71 1.74 1.37	1.25 .03	
A0001+14 0222 N7816	0 1.15 5.16 1.2	14 56.4 33.3 7 11	106.22 -46.10 102.79	308.1 16.1 300.3	S S...4..	9 9 4	P048F 2.2 P048N			.039 1.29 .039	.038 .05 .038	1.38 1.28 1.30		
N7817	0 1.40 5.17	20 28.4 33.3	108.23 -40.76	313.8 17.1	.SA..4*/	4	P048C 2.2			1.57 .036	.50 .032	1.45 1.47		
N7819	0 1.8 5.18	31 12 33.3	111.32 -30.33	325.0 18.7	.SBS3..	3	P048N 2.1			1.30 .039	.07 .038	1.28 1.31		
A0002-07	0 2.0 5.15	-7 21 33.3	91.79 -67.06	286.1 10.1						1.47 .075	.26 .100	1.41		
A0003+19 MK335 N7828	0 3.75 5.18 3.8	19 55.5 33.2 -13 41	108.77 -41.42 83.20	313.4 16.5 280.1	.RING.A	10R	P200V							
N7829	0 3.8 5.14	-13 41 33.2	83.20 -72.70	280.1 7.7	.RING.A	-2R	P200V							
A0003+41	0 3.80 5.10	-41 46.4 33.2	332.83 -72.91	253.5 -1.6	.SBS7S/ RING.A	7 10R	P048C P200V							
A0004-06B	0 4.17 5.15	-6 54.9 33.2	93.52 -66.92	286.7 9.7	.RING.A	-2R	P200V							
A0004-06A	0 4.19 5.15	-6 55.0 33.2	93.53 -66.92	286.7 9.7	.RING.A	-2R	P200V							
N0001	0 4.69 5.19	27 25.9 33.2	111.12 -34.15	321.1 17.6	.SAS3*.	3	P048C 2.0			1.28 .038	.11 .035	1.25 1.28		
N0002	0 4.71 5.19	27 24.1 33.2	111.11 -34.18	321.1 17.6	.S..1..	1	P048C 1.7			1.14 .037	.20 .035	1.09 1.12		
11530	0 4.74 5.20	32 20.0 33.2	112.29 -29.35	326.2 18.3	.S..3*/	3*	P048C 1.5			1.26 .037	.55 .035	1.13 1.16		
N7836 MK336 N0007	0 5.44 5.20 5.82	32 47.5 33.2 -30 11.8	112.55 -28.92 13.98	326.7 18.2 264.6	.SB.3S/ S	3 5	P048C W100V			1.07 .050 1.40	.18 .050 .57	1.03 1.27		
N0010	0 5.11 6.1	33.2 -34 9	111.9 354.13	1.9 260.9	.SBS3..	3	P048C 1.9			.057 1.43 .129	.058 .22 .082	1.29 1.38 1.40		
N0012	0 6.18 5.16	4 20.0 33.2	103.33 -56.63	297.8 12.4	.SBR4*.	4	P048C 2.1			1.27 .037	.05 .034	1.26 1.28		
N0014	0 6.2 5.18	15 32 33.2	108.13 -45.83	309.0 15.0	RIBS9P.	10	P200C 3.9			1.47 .046	.11 .045	1.44 1.45		
N0013	0 6.21 5.21	33 9.4 33.2	112.81 -28.60	327.1 18.1	.RS..1*.	1*	P048C 1.9			1.43 .037	.55 .033	1.30 1.34		
N0009	0 6.33 5.19	23 32.4 33.2	110.57 -38.03	317.2 16.6	.S..3*P	3*	P048C 1.7			1.18 .037	.21 .034	1.13 1.16		
N0016	0 6.48 5.20	27 27.2 33.2	111.59 -34.20	321.2 17.2	.LX..-/ E 3	-3	W100V 3.2	B *K	2VS	1.32 .062	.25 .047	1.26 1.30		
N0020	0 6.96 5.21	33 1.9 33.2	112.96 -28.75	327.0 17.9	.L..-*.	-3*	P048C 2.2			1.31 .050	.03 .052	1.30 1.35		
N0023 MK545 N0024	0 7.31 5.20 7.40	25 38.8 33.2 -25 14.6	111.38 -36.01 43.69	319.4 16.7 269.4	.SBS1.. S T -* .SAS5..	1 5 5	P200V 4.0 W100V	SBP*G	3VS	1.37 .035 1.74	.16 .030 .023	1.34 1.37 1.63	0.73 .06 .03	
N0026	0 7.85 5.20	25 33.3 33.2	111.50 -36.13	319.3 16.6	.SAT2..	2	P200V 4.0	S AF	2VS	1.34 .035	.14 .030	1.31 1.34		
N0021	0 8.09 5.22	32 42.3 33.2	113.16 -29.11	326.7 17.6	.SBR4..	4	P048C 1.6			1.14 .038	.27 .036	1.08 1.11		
N0029	0 8.18 5.22	33 4.6 33.2	113.26 -28.75	327.1 17.6	.SXS3*.	3	P048C 1.8			1.26 .035	.30 .030	1.18 1.21		
N0036	0 8.8 5.17	6 6 33.2	105.34 -55.12	299.7 12.2	.SXT3..	3	P048N 2.1			1.38 .039	.19 .038	1.34 1.36		
N0048	0 11.40 5.31	47 57.4 33.2	116.53 -14.17	342.8 18.4	.SX..5P5	5	P048C 1.7			1.23 .037	.17 .035	1.19 1.24		
N0045 0223 N0051	0 11.53 5.09 11.95	-23 27.6 33.2 47 58.7	55.91 -80.67 116.63	271.4 2.9 342.8	.SAS8.. S 6 .L..-P*	8 8 -3	P200V 5.0 P048C	S F	1	1.91 .027 1.26	.15 .021 .09	1.87 1.88 1.24	1.63 .03	
N0050	0 12.1 5.13	-7 37 33.2	97.47 -68.37	286.6 7.6										
N0055	0 12.40 5.04	-39 28.0 33.2	332.90 -75.74	256.3 -2.4	.SBS9*/	9*	S030V P048N	I A	2	2.51 .026 1.29	.70 .018 .16	2.35 2.36 1.25		
N0063	0 15.1 5.19	11 10 33.2	109.85 -50.57	305.2 11.9	.S...P.		P200C 2.0			1.29 .039	.16 .038	1.25 1.27		
N0067A	0 15.60 5.26	29 46.7 33.2	114.44 -32.27	323.9 15.6	.E.S.*.	-5*	P200C 2.2							
N0067	0 15.64 5.26	29 47.1 33.2	114.45 -32.26	324.0 15.6	.E.S.*.	-5*	P200C 2.2			.63 .075	.20 .100	.58 .63		
N0068	0 15.70 5.26	29 47.6 33.2	114.46 -32.25	324.0 15.6	.LA.-..	-3	P200C 3.4			1.17 .050	.04 .050	1.16 1.20	0.84 .04	
N0069	0 15.73 5.26	29 45.7 33.2	114.47 -32.29	323.9 15.6	.LBS-..	-3	P200C 2.1			.54 .075	.08 .100	.52 .56		
N0070	0 15.77 5.26	29 48.1 33.2	114.48 -32.25	324.0 15.6	.SAT5..	5	P200C 3.5			1.23 .049	.05 .045	1.22 1.25		
N0071	0 15.78 5.26	29 47.1 33.2	114.48 -32.27	324.0 15.6	.LA.-P*	-3	P200C 3.5			1.25 .067	.07 .060	1.23 1.27	0.86 .04	
N0072	0 15.86 5.26	29 45.8 33.2	114.50 -32.29	323.9 15.5	.SBT2..	2	P200C 3.3			1.14 .038	.07 .036	1.13 1.16	0.77 .06	
N0072A	0 15.94 5.26	29 45.5 33.2	114.52 -32.30	323.9 15.5	.E.S.*.	-5*	P048C .6			.56 .075	.08 .100	.54 .59		
A0016-19 0 1 A0017+10 0 2 10010	0 16.27 5.09 17.50 5.19	-19 17.1 33.1 10 36.1 33.1	78.51 -78.95 110.59 -51.24	275.7 3.2 304.7 11.2	.S..9.. S .S..9..	9 9 9	P048N P048N P048N			1.19 .039 1.41	.02 .038 .08	1.19 1.20 1.39		
N0078B MK547	0 17.69 5.49 17.8	59 0.9 33.1 0 33	118.98 -3.34 106.72	354.4 17.9 294.9	.TB.9S. S .L....*	10 10 -2*	P200V 4.0 P048N			1.71 .049 1.17	.08 .044 .08	1.69 1.77 1.15	1.60 .05	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N _H N _H (24)	α ₊ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)			
A0001+21 42 1 15381		*		.27 .25	*	*									6850 0 1 220	7069 219		
N7814	12.4 11.71	11.35 .09	13.1 14.2	.25 10.79 .25	0.90 .05	*	0.90 .03	0.56 .04	.77						1047 0 1 50	1249 202	P	
A0001+14				.25								.53 1 .01			886 1 0 10	1085 199		
N7816				.23											5111 0 1 48	5284 173		
N7817				.27												215		P
N7819				.32											4953 1 1 10	5194 241		
A0002-07				.22														
A0003+19		14.10 .09		.26	0.34 .04	-.68 .04	*	*							7445 0 1 220	7657 212		
N7828 V272				.21											5800 0 1 50	5888 88	P	
N7829 V272				.21											5668 0 1 50	5756 88	P	
A0003-41				.23											1380 0 1 180	1340 -40	P	
A0004-06B		*		.22	*	*												P
A0004-06A		*		.22	*	*											117	P
N0001				.30													117	P
				.30													231	
N0002				.30													231	
I1530				.33													241	
N7836				.33											5069 0 1 220	5311 242		
N0007				.22													12	
N0010				.23													-6	
N0012				.22											3938 1 1 19	4098 160		P
N0014 V 80				.25													198	
N0013				.34													242	
N0009				.27													221	
N0016	13.0 12.89	12.95 .08	13.8	.29 12.56	0.99 .03	0.32 .04	*	*	.88 .26						3110 0 1 50	3340 230		
N0020				.33													242	
N0023	12.7 12.67	12.80 .09	11.9 14.1	.28 12.33	0.81 .03	0.83 .05		.68	1.34* 0 1 3	1.135		.915			4568 0 1 100	4793 225	PST	
N0024	12.2 11.89	12.10 .08	13.4 14.3	.22 11.45 .28	0.60 .03	-.04 .03	0.68 .03	0.01 .03	.45 -.15			1.50 1 .03	1.31		563 1 1 26	597 34		
N0026																	225	
N0021				.33													240	
N0029				.33													241	
N0036				.23											6076 0 1 64	6241 165		
N0048				.58													260	
N0045	12.1* 11.07	11.10 .08	14.7 15.1	.21 10.77 .58	0.69 .05	-.04 .05	0.71 .05	-.03 .03	.61 -.10			2.14 3 .01	.45		468 4 1 5	508 40	PT	
N0051																	260	
N0050				.21													109	
N0055	7.8* 8.49	7.9 .3	13.5	.23 6.99 .23	*	*				1.85 2 3 9	.49* 1.19	3.09 2 .10	5.005 1.635		131 3 2 6	98 -33	P	
N0063				.30													179	
N0067A V166				.30											6355 0 1 36	6585 230	P	
N0067 V166				.30											6633 0 1 36	6863 230	P	
N0068 V166		13.95 .08	13.6 14.6	.30 13.56 .30	0.99 .05	*	1.00 .02	0.47 .04	.87						5711 0 3 29	5941 230	P	
N0069 V166		15.8 .15	13.2 15.38	.30 1.00 .06 .30	1.00 .05				.86						6732 0 2 35	6962 230	P	
N0070 V166				.30											7146 0 2 32	7376 230	P	
N0071 V166		14.0 .1	13.8 14.9	.30 13.59 .30	0.98 .05		1.00 .03		.85						6707 0 2 35	6937 230	P	
N0072 V166		14.45 .09	13.8 14.8	.30 14.02	1.03 .04		1.10 .04		.90						6963 0 2 35	7193 230	P	
N0072A V166		15.6 .15	13.2 15.20	.30 .21	.98 .06				.85						6807 0 1 130	7037 230		
A0016-19												.71 1 .01			2060 1 0 64	2116 56		
A0017+10				.23								.94 1 .01			1320 1 0 10	1320 175		
I0010		11.705 .08	15.2 14.9	1.66 9.96 .22	1.43 .05	0.3 .1	1.39 .03	0.3 .1	*	1.70 0 2 2	.785	2.45 6 .01	2.395 .485		-345 5 1 4	-84 261		
N0078B															5250 0 1 200	5389 139		

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log D ₀ (12)	Log A _e m.e. (13)	
N0080	0 18.58 5.24	22 4.8 33.1	113.80 -39.98	316.3 13.5	.LA.-* -3		P048C 2.3			1.40 .071	.04 .071	1.39 1.43	0.99 .03	
N0083	0 18.77 5.24	22 9.4 33.1	113.87 -39.91	316.3 13.5	.E.0... -5		P048C 2.0			1.20 .067	.02 .059	1.19 1.23	0.77 .05	
N0091	0 19.2 5.24	22 8 33.1	113.99 -39.95	316.3 13.4	.SXSSP. 5		P200C 3.5			1.39 .039	.35 .038	1.31 1.33		
N0095	0 19.65 5.19	10 12.9 33.1	111.30 -51.72	304.5 10.6	.SXTSP. 5		W060V 2.8	S F		1.28 .035	.10 .030	1.25 1.27	0.85 .04	
A0021+14 MK338	0 21.21 5.21	14 24.6 33.1	112.99 -47.65	308.7 11.2	S S K				SVS	1.13 .042	.25 .045	1.07		
N0099	0 21.4 5.22	15 30 33.1	113.31 -46.58	309.8 11.5	.S..6P* 6*		P048N 2.0			1.22 .039	.03 .038	1.22 1.24		
N0100	0 21.45 5.22	16 12.5 33.1	113.49 -45.88	310.5 11.6	.S..6*/ 6*		P048C 2.3			1.76 .037	.82 .035	1.57 1.59		
A0022+29A	0 22.0 5.29	29 0 33.1	115.95 -33.23	323.4 14.1										
A0022+14 MK339	0 22.12 5.22	14 32.7 33.1	113.35 -47.55	308.9 11.1	.P..... 1.6		P048N 1.6			1.03 .050	.00 .050	1.03 1.05		
A0022+29B	0 22.6 5.29	29 47 33.1	116.22 -32.47	324.2 14.1						1.12 .075	.00 .100	1.12		
N0105	0 22.69 5.21	12 36.4 33.1	113.10 -49.49	307.0 10.5	.SA.2* 2		P048C 1.6			1.09 .039	.18 .038	1.05 1.07		
A0024+39	0 24.6 5.37	39 31 33.0	117.90 -22.84	334.2 15.2	.P..... 1.5		P048N 1.5			1.10 .050	.27 .050	1.04 1.08		
N0120	0 24.94 5.15	-1 47.4 33.0	109.31 -63.75	293.1 6.2	.LB.* -1		P048C 1.7			1.26 .040	.37 .045	1.17 1.20		
N0124	0 25.32 5.14	-2 5.3 33.0	109.38 -64.06	292.9 6.0	.SASS.. 5		P200V 3.6		3 S	1.21 .035	.19 .030	1.17 1.19		
A0025+30A	0 25.7 5.32	30 32 33.0	117.10 -31.80	325.1 13.6	.SB..S.. 1.7		P048N 1.7			1.28 .039	.46 .038	1.17 1.20		
A0025+30B MK340	0 25.94 5.32	30 52.7 33.0	117.21 -31.46	325.5 13.6										
A0026+02	0 26.07 5.17	2 40.7 33.0	111.70 -59.42	297.5 7.1	.S..3*/ 3*		P048C 1.1			1.02 .039	.54 .038	.89 .91		
N0125	0 26.27 5.17	2 33.7 33.0	111.75 -59.54	297.4 7.1	.SA.0* 0		P048C 2.1		3	1.30 .039	.05 .038	1.28 1.31	0.91 .03	
N0126	0 26.57 5.17	2 32.0 33.0	111.89 -59.58	297.4 7.0	.LB.0* -2		P048C 1.6			1.14 .075	.24 .100	1.08 1.11		
N0127	0 26.63 5.17	2 35.8 33.0	111.94 -59.52	297.5 7.0	.LA.0* -2		P200C 3.0	DSP*K		1.02 .051	.11 .055	.99 1.02	0.4 .07	
N0128	0 26.68 5.17	2 35.3 33.0	111.96 -59.53	297.5 7.0	.L...P/ E 8	-2	P200V 4.0	D P K	3	1.53 .039	.51 .036	1.41 1.44	0.80 .05	
N0130	0 26.74 5.17	2 35.7 33.0	111.99 -59.53	297.5 7.0	.LA.-* -3		P200C 2.8			.96 .042	.19 .045	.91 .94	0.5 .07	
N0131	0 27.1 4.97	-33 33 33.0	339.15 -82.25	262.8 284.1	.SBS3*/ 3		W100V 2.9			1.33 .088	.52 .055	1.21 1.23		
A0027-11	0 27.6 5.10	-11 23 33.0	109.38 -73.21	284.1 2.9						1.42 .075	.33 .100	1.35		
N0132	0 27.60 5.16	1 49.0 33.0	112.16 -60.33	296.8 6.5	.SX54.. 4		W060V 2.9		3 S	1.31 .035	.10 .031	1.29 1.31		
N0134	0 27.9 4.96	-33 32 33.0	338.25 -82.37	262.9 3.6	.SXS4.. 4		W100V 4.1	S F	3VS	1.91 .056	.50 .035	1.79 1.81	1.35 .05	
A0028-10	0 28.7 5.10	-10 45 33.0	106.04 -72.68	284.7 2.8						1.27 .075	.09 .100	1.25		
A0028+08 MK552	0 28.7 5.20	8 12 33.0	114.43 -54.06	303.1 7.9						.95 .042	.01 .045	.95		
N0145	0 29.20 5.13	-5 25.8 32.9	110.02 -67.53	289.9 4.2	.SBS8.. 8		P200V 3.8		1	1.26 .049	.10 .039	1.24 1.25	.90 .04	
A0029+31	0 29.5 5.34	31 24 32.9	118.15 -31.02	326.1 12.9	.S..4.. 4		P048N 1.8			1.21 .039	.17 .038	1.17 1.20		
N0147 D 3	0 30.46 5.52	48 13.8 32.9	119.82 -14.26	343.3 15.3	.E.S.P. E 4P	-5	W060V 4.4	L	3ES	2.11 .060	.20 .038	2.06 2.15	1.8 .09	
I1554	0 30.66 4.95	-32 32.1 32.9	339.61 -83.51	264.0 3.8	.S..0* 0*		P048C 2.0	L						
A0031+31 D 4	0 31.25 5.35	31 10.7 32.9	118.57 -31.27	326.0 12.5	.S..9.. 9*		P048N 2.1			1.28 .046	.01 .045	1.27 1.29		
N0151	0 31.50 5.10	-9 58.9 32.9	108.86 -72.10	285.7 2.4	.SBR4.. S 4	9*	P200V 4.3			1.57 .036	.29 .025	1.50 1.52	1.07 .04	
A0031-31 D224	0 31.7 4.96	-31 3 32.9	347.93 -84.75	265.5 3.6	.I..9* S	10*	P048N 2.2	S FG	3 S	1.32 .046	.02 .045	1.32 1.33		
N0150	0 31.79 4.98	-28 4.8 32.9	21.89 -86.13	268.3 2.8	.SBT3* S 5	3*	W100V 3.8		4ES	1.62 .035	.26 .031	1.56 1.58	1.10 .04	
A0031+30	0 31.8 5.35	30 7 32.9	118.61 -32.34	324.9 12.2										
N0148	0 31.80 4.95	-32 3.7 32.9	340.66 -84.03	264.5 3.9	.L...*/ S 0	-1*	P048C 2.0			1.38 .069	.29 .100	1.31 1.34	*	
N0157	0 32.24 5.10	-8 40.3 32.9	110.28 -70.86	287.0 2.5	.SXT4.. S S K	4	P200V 4.5	S AF	5	1.63 .040	.17 .027	1.59 1.61	1.20 .02	
A0032+36	0 32.6 5.41	36 14 32.9	119.32 -26.25	331.1 13.2										
I1558 D225	0 33.30 4.99	-25 39.1 32.9	58.59 -86.08	270.8 2.5	.SX.8.. S	8	P048N 2.5			1.53 .039	.15 .038	1.49 1.50		
N0160	0 33.44 5.31	23 40.9 32.8	118.44 -38.78	318.6 10.5	.RLA.+P. -1		W100V 3.6		4	1.50 .038	.22 .033	1.45 1.48	0.9 .07	
N0163	0 33.46 5.09	-10 23.8 32.9	110.13 -72.61	285.4 1.8	.E.0... -5		M082C 2.9		2VS	1.15 .316	.00 .158	1.15 1.18	.76 .06	
A0033-10	0 33.6 5.09	-10 10 32.8	110.39 -72.39	285.6 1.8						1.19 .075	.00 .100	1.19		
N0165	0 33.95 5.09	-10 22.8 32.8	110.53 -72.62	285.5 1.7	.SBT4.. 4		M082C 3.0			1.20 .054	.07 .050	1.18 1.20	*	
I1559 MK341	0 34.23 5.31	23 42.6 32.8	118.67 -38.77	318.7 10.3	.LX..P* -2		P200C 2.7			.96 .050	.29 .050	.90 .93		
N0169 MK341	0 34.23 5.31	23 42.9 32.8	118.67 -38.76	318.7 10.3	.SAS2*/ 2		P200C 3.6			1.48 .044	.51 .040	1.36 1.39		
A0034+25	0 34.45 5.33	25 25.4 32.8	118.89 -37.06	320.4 10.7						1.24 .071				
N0173	0 34.6 5.17	1 40 32.8	115.63 -60.73	297.1 4.8	.SAT4.. 4		P048N 2.6			1.55 .039	.04 .038	1.54 1.56		
N0172	0 34.8 5.00	-22 52.8 32.8	86.90 -84.44	273.5 2.0						1.42 .075	.82 .100	1.23		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₈ m' ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _E (U-B) _E (23)	Log S _R N _N N ₊ (24)	α ₋ α ₊ (25)	Log S _H N _N A ₂₁ (26)	RI HI (27)	V N _N N ₀ m.e. (28)	V ₀ ΔV (29)	
N0080		13.10	13.5	.26	1.05	*	1.04	0.67	.94					5586	5796	P
N0083		.09	14.9	12.75	.02	*	.05	.06						0 1 100	210	
N0091		13.70	13.0	.26	1.07	*	1.09	0.58	.95					0 1 150	6541	
N0095	13.1	.08	14.6	13.34	.04		.03	.06						0 1 150	210	
A0021+14	13.11	13.25	13.0	.23	0.70	0.07	0.85	0.28	.60					0 1 190	5168	S
		.08	14.2	12.91	.04	.04	.03	.03	-.01					4891	5064	
				.24										0 1 48	173	
														5365	5551	
N0099				.24										0 1 220	186	S
N0100				.24										5154	5343	
A0022+29A				.30										0 1 78	189	
A0022+14				.24										4774	4999	
A0022+29B				.30										0 1 105	225	S
														5365	5550	
														0 1 220	185	
														4798	5025	
N0105		13.9		.23	.71				.58					0 1 105	227	S
A0024+39		.15	13.7	13.47	.06									5260	5439	
42 20				.39										0 1 26	179	
N0120				.21										10774	11018	
N0124				.21										0 1 105	244	S
A0025+30A				.30											125	
														6445	123	
A0025+30B				.31										0 1 105	6671	
A0026+02				.21										6152	6379	P
														0 2 43	227	
N0125		13.20	13.2	.21	0.90	*	0.90	0.34	.79					4460	4601	
N0126		.07	14.4	12.88	.03		.02	.04						0 1 50	141	
N0127		15.0	12.5	.21	0.98	0.41	0.99	0.45	.88					5289	5430	P
		.13	14.7	14.68	.03	.04	.03	.04	.37					0 1 50	141	
														4283	4423	
														0 1 50	140	
N0128	12.9	12.6	12.1	.21	1.00	0.59	1.02	0.62	.87					4094	4235	PT
	12.62	.1	13.8	12.12	.02	.03	.02	.03	.51					0 1 40	141	
N0130		15.10	13.1	.21	0.79	-.02	0.80	0.02	.69					4243	4384	
N0131		.13	14.3	14.78	.04	.06	.04	.06	-.04					0 2 26	141	
A0027-11				.21										4548	4689	P
N0132				.21										0 1 70	141	
															-14	
															83	
N0134	11.4	11.0	13.2	.22	0.88	0.29	0.97	0.35	.73	1.60*			2.23*	1545	1531	P
A0028-10	10.92	.13	14.1	10.37	.05	.05	.06	.05	.15	0 1 1	.75*			0 1 69	-14	
A0028+08				.22										3475	3560	
N0145		13.20	13.2	.21	0.44	-.16	0.47	-.22	.34					0 1 30	85	
A0029+31		.07	14.1	12.90	.03	.03	.03	.03	-.23					4200	4360	P
				.31										0 1 200	160	
														4160	4267	
														0 2 18	107	
N0147	12.1	10.4	14.9	.57	0.94		0.93								226	T
I1554	10.36	.13	15.4	.22	.04		.03								252	
A0031+31				.31											-11	
N0151	12.5	12.28	13.1	.21	0.74	0.13	0.85	0.28	.61						225	
A0031-31	12.24	.07	14.3	11.81	.03	.04	.02	.03	.03					3659	3746	P
				.22										0 1 42	87	
												.93		1586	1581	
												1 .01		1 0 10	-5	
N0150	12.2	11.75	12.7	.21	0.62	-.02	0.70	0.04							7	S
A0031+30	11.88	.13	14.0	.30	.05	.05	.04	.04						6087	6309	
														0 1 105	222	
N0148	12.9	13.08		.22	0.96	0.44	*	*	.86					1486	1476	
N0157	11.1	11.03	12.5	.21	0.61	-.02	0.68	0.07	.52	1.45	.51*	1.56	2.31	0 1 52	-10	PT
A0032+36	11.05	.05	13.6	10.67	.02	.03	.02	.02	-.09	3 3 3	1.33*	1 .01	1.99	1657	1749	
				.35										1 2 12	92	
															234	
I1558				.21								1.21		1556	1573	S
N0160		13.4	13.4	.26	0.97		1.02		.83			1 .01		1 0 10	17	
N0163		.13	15.2	12.93	.05		.04							5255	5460	
A0033-10		13.75	13.0	.20	1.00	0.50	1.05	0.50	.04					0 1 50	205	
N0165		14.05		.20	0.83	0.20	*	*	.73					4891	4976	S
		.09	14.7	13.76	.04	.04			.12					0 1 105	85	
														5881	5964	
														1 1 9	83	
I1559				.26											205	P
N0169		*		.26	*	*								4477	4682	
A0034+25				.27						1.08*	.65*			0 1 220	205	
N0173				.21						1 1 1	1.80*			9630	9839	
N0172				.21										0 1 120	209	P
														4355*	4487	
														1 2 9	132	
															29	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log R ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log D ₀ (12)	Log A _e m.e. (13)
N0175	0 34.86	-20 12.6	98.05	276.1	.SBR2..	2	P200V		3	1.42	.04	1.41	*
A0035-34.	0 35.0	-34 1	-82.12	1.3	SB3	1	4.2	B G	4	.052	.043	1.43	
N0180	0 35.4	8 32.8	326.59	262.8	.RING..	10R	P200V						
N0182	0 35.64	2 27.2	-82.73	-5.1	.SBT4..	4	P048N			1.42	.08	1.40	
A0035+14	0 35.78	14 45.9	117.27	303.7	PSXT1*.	1	P048C		3	.039	.038	1.42	
MK343	5.25	32.8	-54.08	6.4	.L.....	-2	P048N			1.36	.07	1.35	
N0185	0 36.19	48 3.7	-59.97	4.8			2.2			.038	.035	1.37	
N0190	0 36.3	6 46	118.26	309.9			1.9			1.24	.19	1.20	
N0191	0 36.45	-9 16.6	-47.71	7.9						.042	.045	1.23	
I1563	0 36.47	-9 17.4	120.80	343.3	.E.3.P.	-5	W060V	E P	3	2.06	.07	2.05	1.75
N0178	0 36.63	-14 26.8	-14.48	14.3	E 0*		4.4	DE GK	1	.058	.038	2.14	.04
N0192	0 36.7	0 35	117.41	302.2	.S..2..	2	P048N			1.01	.07	.99	
N0194	0 36.73	2 45.8	-55.70	5.8	.SXT5*P	5	P200C			.039	.038	1.01	
N0193	0 36.73	3 32.8	113.14	286.7			3.4			1.19	.06	1.18	
I1565	0 36.8	6 27	-71.64	1.4	.I.0.SP	05	P200C			.051	.041	1.20	
N0198	0 36.81	2 31.4	113.14	286.7	.SBS9..	9	W100V			.79	.32	.71	
N0200	0 37.01	2 36.8	-71.65	1.4	P T **		3.2	I P A *		.061	.058	.73	
N0195	0 37.06	-9 28.1	-76.73	-1.1						1.30	.23	1.25	*
N0201	0 37.1	0 35	116.48	296.2	.SB.1*.	1*	P048N			.053	.043	1.26	
N0205	0 37.64	41 24.9	-61.86	4.0			2.0			1.37	.29	1.30	
A0037+24	0 37.84	24 45.1	116.93	298.3	.E.1...	-5	P048C		3	.039	.038	1.32	
MK345	5.34	32.7	-59.69	4.6	.LXS...	-3	P048C			1.28	.00	1.28	0.87
N0210	0 38.07	-14 8.8	116.98	298.6			2.1			.050	.051	1.31	.03
A0038-21	0 38.1	25 13.5	-59.40	4.7			2.3			1.24	.02	1.24	.075
A0038-01	0 38.81	25 13.5	-56.02	5.6						.071	.071	1.27	.03
N0214	0 38.96	-21 19.2	117.58	301.9	.SARS..	5	W100V			1.23	.00	1.23	
N0216	0 39.0	-10 18	-56.92	5.6			3.1		4VS	.051	.058		
N0217	0 39.7	-18 27	117.02	298.1	.SBS4..	4	W100V			1.13	.00	1.13	0.75
A0039-18	0 39.7	-18 27	-59.93	4.5	RS..1*.	1*	P048C			.036	.034	1.15	.04
I0043	0 39.7	29 22	117.02	298.1	.SK.5..	5	P048N			1.31	.25	1.25	
A0039+40	0 39.8	40 18	-71.85	1.2			3.2		4VS	.036	.032	1.27	
N0221	0 39.97	40 35.5	-83.57	-2.5	.E.2.P*	-5	P048C			1.12	.09	1.10	
N0224	0 40.0	40 59.7	117.09	293.9	.SK.5..	5	P048N			.055	.048	1.12	
N0227	0 40.06	-1 48.3	-64.47	2.8	.E.5.P.	-5	....V	E P	5	1.34	.06	1.33	
I1574	0 40.58	-22 31.5	120.72	336.5	E 6*T **		5.0	D G		.039	.038	1.35	
N0237	0 40.90	-0 23.8	119.80	319.9						2.24	.25	2.18	1.88
I0049	0 41.4	1 35	-37.78	9.8	.SXS3..	3	P200V	SDP*GK	3	.034	.020	2.24	.04
A0042+27	0 42.27	27 10.5	-76.50	-4.4	S 2	1	4.7		5	1.73	.16	1.69	1.35
A0043+37	0 43.0	37 44	101.11	275.2	.E.2.P*	-5	P048C			.035	.025	1.71	.05
N0244	0 43.28	-15 52.2	111.58	282.1	.S..1..	1	P048N						
A0043-11	0 43.53	-11 47.0	-83.57	-2.5	.SXS5..	5	W100V	S G	2	1.12	.00	1.12	
N0245	0 43.54	-2 0.0	117.09	293.9			1.8			.039	.038	1.14	
MK555	5.14	32.6	-64.47	2.8	.SK.5..	5	W100V			1.32	.11	1.30	0.82
A0044+32	0 44.2	32 24	120.11	320.4	S 3	1	3.3		3VS	.035	.030	1.32	.05
A0044+50	0 44.6	50 37	-37.32	9.7	.I.0.S/	05	P048C			1.25	.39	1.16	
N0247	0 44.66	-21 2.0	-83.50	-2.5			1.7			.061	.058	1.19	
N0254	0 45.04	-31 41.6	114.69	285.9	CE.2...	-6	....V	E3 K	4	1.52	.59	1.38	
A0045-20A	0 45.11	-20 42.0	-72.74	.5	E 2		5.0	E3 K		.075	.100		
N0253	0 45.13	-25 33.7	109.08	278.1	.SAS3..	3	....V	S K	4	1.57	.88	1.36	
A0045-20B	0 45.15	-20 47.5	-80.80	-1.9	S 3	2	5.0	S GK		.075	.100		
A0045-10	0 45.2	-10 11	-80.80	-1.9	.E.3.P*	-5	P048C			.075	.100		
N0255	0 45.27	-11 44.5	120.55	295.6	.SA.SP.	5	P048N			1.32	.03	1.31	
I1586	0 45.28	22 6.1	-83.50	-2.5			2.2			.039	.038	1.33	
MK347	5.34	32.5	-60.96	3.2	.SK.5..	5	P048N						
					.SAT3P*	35	W100V			1.32	.03	1.31	
					I *		3.1	I P A *	4VS	.039	.038	1.33	
					PSBS3..	3	P048N			1.41	.43	1.31	
					.SXS3..	3	P048N			.039	.038	1.34	
					.SXS7..	7	W100V	SI *A	4ES	1.14	.09	1.12	
					S 6	7	5.0			.039	.038	1.19	
					.SKR05.	0	P048C			2.30	.43	2.20	2.0
					S 0	1.9	P048C			.024	.017	2.21	.05
					.S..3P*	3*	P048C			1.32	.27	1.26	.72
							1.4			.141	.075	1.29	.07
					.SKX5..	5	W100V	S AF*	3ES	1.13	.39	1.04	
					S 5PK -		5.0			.061	.058	1.06	
					.SBS5P*	5	P048C			2.40	.53	2.27	1.85
							1.8			.020	.013	2.29	.05
					.SB.65.	6*	P048N			1.14	.08	1.12	
					.SKT4..	4	P200V			.061	.058	1.14	
					S 4 N	3*	4.3	SX G	4 S	1.51	.76	1.33	
										1.33	.10	1.31	
										1.49	.05	1.48	1.15
										.042	.031	1.50	.05

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _c (15)	B _T m.e. (16)	m _s m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₁ α ₂ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)			
N0175	12.8	12.8		.21	0.74	0.12	*	*									PT	
A0035-34.	12.51	.1	14.6	.22	.04	.04										40		
N0180				.22											5221	-20		
N0182		13.4		.21	.84				.73						0 1 29	5377		
A0035+14		.15	14.9	.23	.06										5231	156		
															0 2 33	5365		
															5491	134		
															0 2 43	5668		
N0185	11.8	10.07	14.3	.56	0.90	*	0.91	0.37	.78						-245	4	PT	
N0190	10.20	.05	15.2	.22	.05		.02	.04							0 3 33	249		
32 10				.20											12107	12257		
N0191				.20											0 1 150	150	P	
I1563				.20												86	P	
N0178	12.9	13.1		.20	0.50	-.36	*	*								86		
	12.83	.1	13.9	.21	.03	.05										64		
N0192				.21														
N0194		13.00	12.8	.21	0.92	*	0.95	0.63	.82						5105	126		
		.05	14.4	12.71	.03		.02	.06							0 1 50	5239		
N0193		13.35	12.6	.21	1.01	0.47	1.02	0.51	.92	2.20	.55		-1.97		0 1 4220	134		
I1565		.06	14.4	13.07	.02	.04	.02	.04	.44	8 6 8	.74				0 1 165	4356		
				.22											4477	136		
															11162	11310		
N0198		13.5	12.7	.21	0.67		0.74	.04							0 1 120	148		
		.1	14.0	.21	.04											134		
N0200				.21											5110	5244		
N0195				.20											0 1 39	134		
N0201				.21												85		
N0205	10.8	8.85	13.7	.41	0.84	*	0.79	0.20	.75						-239	126	PT	
A0037+24	9.20	.08	14.4	.27	.04		.02	.04							0 2 12	240		
															4477	4682		
															0 1 220	205		
N0210	12.5	11.65	13.9	.20	0.80	*	0.87	0.31	.71						1635	1700	PST	
A0038-21	11.74	.09	14.7	11.31	.04		.04	.05							0 1 50	65		
				.21												32		
A0038-01		13.8		.21	.61	.01			.52						5110	5225		
		.15	14.2	13.53	.06	.07			-.01						0 1 90	115		
N0214	12.8	12.95	12.5	.27	0.72	0.11	0.80	0.17	.61			.64			4484	4690		
	12.81	.08	14.1	12.57	.03	.04	.04	.04	.03			1 .01	2.40		1 2 24	206		
N0216		13.8		.21	.48	-.17			.35			.98			1564	1597		
		.15	13.9	13.29	.06	.07			-.24			1 .02	.80		1 1 28	33		
N0217				.20														
A0039-18				.21												80		
I0043				.29											4861*	5077	S	
A0039+40				.40											1 1 10	216		
															-375	-138		
N0221	9.5	9.15	9.8	.40	0.94	0.47	0.94	0.50	.85						1 0 5	237		
	9.12	.1	13.2	8.75	.02	.02	.01	.01	.38						-217	21	PT	
															0 3 9	238		
N0224	5.0*	4.365	13.4	.41	0.91	0.50	1.00	*	.74	3.48	.80	4.18	4.32		-299	-61	PST	
N0227	4.48	.03	14.3	3.59	.02	.02	.05		.34	7 1 1	.70*	6 .02	2.50		7 5 3	238		
	13.1	*		.21											5315	5429		
I1574	12.78		14.1	.21								.49			0 1 65	114		
												1 .02			369	395		
N0237	13.2	13.7		.21											1 0 10	26		
I0049	13.26	.15	14.4	.21												119		
				.21											4561	4688		
															1 1 9	127		
A0042+27				.28												5365	5574	
															0 1 220	209		
A0043+37		13.9	16.9	.36	0.68	0.22	0.69	0.23								231		
		.1		.20	.05	.06	.05	.04							941	995		
N0244		13.7		.20	.42	-.20			.36			.72			1 2 16	54		
A0043-11		.15	14.1	13.47	.06	.07			-.23			1 .01	1.29		1618	1689		
				.20								.93			1 0 10	71		
N0245	12.9			.21								1 .01			4350	4461		
	13.18		13.7												0 1 200	111		
A0044+32				.31														
A0044+50				.66												220		
															5178	5426		
N0247	10.7	9.4	14.9	.21	0.65	*	0.72	-.04	.52			2.48			1 1 9	248		
	9.77	.1	14.7	8.85	.05		.05	.05				2 .02	1.49		150*	180	T	
N0254	12.8	12.70	11.8	.21	0.88	0.46	0.90	0.51							3 1 6	30		
	12.96	.09	13.5	.21	.03	.03	.03	.03										
A0045-20A																-16		
															6207	6238		
															0 1 72	31		
N0253	7.0*	8.04	12.8	.21	0.97	*	1.01	0.39	.82	2.76	.58	3.12	2.29		249	259	PST	
A0045-20B	7.88	.09	13.6	7.40	.05		.04	.04		18 812	.81	2 .03	1.31		2 2 7	10		
				.21											6351	6382		
A0045-10				.20											0 1 72	31		
N0255	12.8	12.35	13.6	.20	0.55	-.27	0.58	-.18	.48							77		
	12.36	.09	14.5	12.10	.04	.05	.06	.05	-.32						1803	1873		
I1586				.25											0 1 58	70		
32 12															5854	6047		
															0 2 43	193		

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log D ₀ (12)	Log A _e m.e. (13)	
N0252	0 45.36	27 21.2	122.02	322.8	RSAR0*	0	P048C			1.25	.13	1.22		
	5.39	32.5	-35.24	8.7			1.9			.047	.044	1.25		
N0257	0 45.5	8	121.51	304.0	.S..6*	6*	P048N			1.32	.13	1.28		
	5.22	32.5	-54.54	3.9			2.1			.039	.038	1.30		
N0259	0 45.51	-3 3.0	120.90	293.3	.S..4*/	4*	P048C			1.51	.61	1.37		
	5.13	32.5	-65.64	.9			2.0			.053	.044	1.39		
N0260	0 45.91	27 25.3	122.17	322.9	.S..5P*	5	P048C			1.02	.00	1.02		
	5.40	32.5	-35.17	8.6			1.6			.037	.035	1.04		
N0262	0 46.07	31 41.0	122.28	327.1	.SAS0*	0	M082V			1.16	.01	1.16		
MK348	5.45	32.5	-30.91	9.5			2.9			.046	.045	1.20		
A0046-12	0 46.08	-12 59.3	120.15	283.8	.LB..5P	-2*	P048C			1.06	.14	1.03		
	5.05	32.5	-75.57	-1.9			1.6			.075	.100	1.06		
A0046-02	0 46.4	-2 38	121.46	293.8										
MK557	5.13	32.5	-65.23	.8										
N0266	0 47.1	32 0	122.54	327.5	.SBT2..	2	P048N			1.51	.01	1.50		
	5.46	32.5	-30.60	9.4			2.6			.039	.038	1.53		
A0047-21	0 47.33	-21 17.5	119.36	275.8	.I..9..	10	P048N			1.22	.32	1.14		
D 6	4.97	32.4	-83.88	74.4			1.7			.046	.045	1.15		
N0268	0 47.62	-5 28.0	122.09	291.1	.SXT3..	3	P048C			1.24	.11	1.21		
	5.11	32.5	-68.06	-2	S 5	3	1.9			.054	.046	1.23		
N0271	0 48.2	-2 9	122.54	294.4	.SBR2..	2	P048N			1.39	.06	1.38		
	5.14	32.4	-64.75	.5			2.3			.039	.038	1.40		
N0273	0 48.27	-7 9.4	122.88	289.5	.L....	-2	M060V			1.41	.46	1.30		
	5.09	32.4	-69.76	.9			2.7		4VS	.062	.061	1.33		
N0274	0 48.50	-7 19.7	122.65	289.4	.LXR-P*	-3	P200V			1.24	.03	1.23		
	5.09	32.4	-69.93	-1.0	E 1		3.9	D K	5VS	.088	.043	1.26		
N0275	0 48.55	-7 20.1	122.68	289.4	.SBT6P*	6	P200V			1.18	.11	1.15		
	5.09	32.4	-69.93	-1.0	S T		3.7	I P		.045	.034	1.17		
I0056	0 49.0	-13 7	123.01	283.8						1.12	.05	1.11		
	5.04	32.4	-75.72	-2.6						.075	.100			
N0278	0 49.25	47 16.8	123.05	342.8	.SXT3..	3	P200V	SD *F	3*	1.34	.01	1.34	0.78	
	5.70	32.4	-15.32	12.0	E 0P		4.1	SI F	3 L	.048	.040	1.39	.04	
I0056A	0 49.4	-13 1	123.40	284.0										
	5.04	32.4	-75.62	-2.7										
A0049-16	0 49.5	-16 41	123.65	280.4						1.19	.00	1.19		
	5.01	32.4	-79.28	-3.7						.075	.100			
N0279	0 49.7	-2 28	123.42	294.2	.L.....	-2	P048N			1.26	.07	1.24		
MK558	5.13	32.4	-65.07	.1			2.0			.051	.058	1.27		
N0289	0 50.29	-31 28.7	299.15	266.1	.SBT4..	4	M100V		2	1.57	.14	1.54		
	4.85	32.4	-85.91	-7.6	S 4 P	2*	3.8		3 S	.044	.033	1.56		
A0050-21	0 50.90	21 14.5	123.60	317.1										
MK349	5.36	32.4	-41.36	6.0										
A0051-73	0 51.0	-73 6	302.80	224.2	.SBS9P*	9	....V			3.45	.25	3.39	
	5.52	32.4	-64.30	-14.8			5.0			.049	.015	3.41		
A0052-19	0 52.4	-19 18	128.68	278.1						1.50	.18	1.46		
	4.97	32.3	-81.86	-5.0						.075	.100			
N0300	0 52.52	-37 57.4	299.23	259.8	.SAST..	7	R074V	S A		2.30	.13	2.27		
	4.75	32.3	-79.42	-9.5			5.0		3ES	.024	.016	2.29		
N0309	0 54.19	-10 11.1	127.32	287.0	.SARS..	5	P200V			1.49	.06	1.48	1.20	
	5.06	32.2	-72.74	-3.1	S 5	2	4.3	S F	4 S	.038	.054	1.50	.04	
A0054-23	0 54.65	23 37.1	124.67	319.7						1.06	.11	1.03		
MK350	5.40	32.2	-38.96	5.8						.042	.045			
A0054-43	0 54.9	43 25	124.14	339.2	.S..3..	3	P048N			1.00	.18	.96		
	5.68	32.2	-19.17	10.3			1.4			.039	.038	1.00		
N0321	0 54.90	-5 17.9	126.91	291.8	.SBT6..	6	P048C							
	5.10	32.2	-67.85	-1.9										
N0315	0 54.10	30 4.9	123.57	326.0	.LA..*	-3	P048C			1.51	.16	1.47		
	5.48	32.2	-32.50	7.3			2.4			.065	.052	1.51		
N0327	0 55.39	-5 24.0	127.25	291.7	.SAS4..	4	P048C			1.29	.37	1.20		
	5.10	32.2	-67.95	-2.1			1.8			.055	.047	1.22		
N0329	0 55.49	-5 20.5	127.30	291.8	.S..2*/	2*	P048C			1.27	.39	1.18		
	5.10	32.2	-67.89	-2.1			1.7			.054	.047	1.20		
A0055-48	0 55.5	48 23	124.12	344.1	.SXS3..	3	P048N			1.22	.09	1.20		
	5.79	32.2	-14.20	11.2			1.9			.039	.038	1.26		
N0326.	0 55.67	26 35.9	124.85	322.6	.E+4P*	-4	P048C			1.17	.00	1.17	0.85	
	5.44	32.2	-35.98	6.3			2.2			.051	.058	1.21	.05	
A0055-36	0 55.7	36 28	124.51	332.3	.SXS5..	5	P048N			1.25	.05	1.24		
	5.57	32.2	-26.11	8.6			2.0			.039	.038	1.27		
A0056-19	0 56.4	-19 3	134.89	278.6						1.60	.27	1.53		
	4.96	32.2	-81.48	-5.9						.075	.100			
A0057-31	0 57.14	31 33.5	125.03	327.6	.LA.....	-2	M082V							
MK352	5.51	32.1	-31.01	7.2										
N0337	0 57.31	-7 50.7	129.14	289.5	.SB57..	7	L036V			1.44	.14	1.41	0.98	
	5.08	32.1	-70.35	-3.2	S 5 N	4*	2.7	S A *		.050	.040	1.42	.03	
A0057-33	0 57.6	-33 58	287.82	264.0	.E.3.P*	-5	P048C							
	4.77	32.1	-83.18	-9.6										
I0065	0 58.0	47 25	124.58	343.2	.SXS4..	4	P048N			1.61	.48	1.50		
	5.79	32.1	-15.16	10.6			2.3			.039	.038	1.55		
A0058-07	0 58.80	7 21.3	127.26	304.2	.SX.9..	9	P048F			1.26	.17	1.22		
D 7	5.23	32.1	-55.16	.5	SX	9	1.9			.046	.045	1.23		
N0337A	0 59.04	-7 51.4	130.41	289.6	.SXS8..	8	P048C			1.76	.10	1.74		
	5.07	32.1	-70.31	-3.6			3.0			.061	.058	1.75		
N0352	0 59.61	-4 30.9	129.78	292.8	.SB.4..	4	P048C			1.43	.36	1.35		
	5.11	32.0	-66.98	-2.9			2.1			.052	.043	1.37		
A0059-30	0 59.7	30 27	125.73	326.6										
	5.51	32.0	-32.09	6.4										
N0354	1 0.58	22 4.4	126.53	318.5	.SB..P*	3*	P048N			.96	.23	.90		
MK353	5.40	32.0	-40.45	4.1			1.3			.046	.045	.92		
N0357	1 0.84	-6 36.3	131.24	290.9	.SBR0..	0*	M100V		45	1.42	.13	1.39	0.98	
	5.09	32.0	-69.02	-3.7	SBO		3.5	B K *	4VS	.053	.045	1.41	.02	
N0365	1 1.8	-35 23	284.94	262.8	.S..5P*	5	P048C							
	4.72	32.0	-81.56	-10.8										
I1613	1 2.22	1 51.0	129.74	299.2	.IXS9..	10	P048C			2.08	.03	2.08		
D 8	5.18	31.9	-60.58	-1.8			3.7			.029	.029	2.09		
A0102-06	1 2.55	-6 28.6	132.36	291.1	.SXT7..	7	M100V			1.60	.05	1.59		
	5.09	31.9	-66.83	-4.1	SX	8	4.0	SX F		.043	.032	1.60		
A0103-31	1 3.4	31 8	126.62	327.5	.SA.4..	4*	P048C			1.31	.47	1.20		
	5.54	31.9	-31.37	5.8			1.7			.050	.050	1.23		
N0375	1 4.34	32 4.8	126.78	328.4	.E.2.*	-5*	P200C			1.13	.00	1.13		
	5.56	31.8	-30.41	5.8			3.4			.316	.158	1.18		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _{1/2} m.e. (21)	(U-B) _{1/2} m.e. (22)	(B-V) _{1/2} (U-B) _{1/2} (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H m.e. (28)	V ₀ ΔV (29)	
N0252				.28											207	
N0257				.22											5272	5420
N0259				.20											0 1 40	148
N0260				.28												106
N0262		°		.31	*	*	*	*							4182	207
A0046-12		13.9		.20	.27	.39		.15							0 1 220	4399
A0046-02		.15	13.7	13.55	.06	.07		-.40							6415	6479
N0266				.31											0 3 20	64
A0047-21				.21											0 1 100	4127
N0268	13.2			.20								.20			302	217
	13.28		14.1									2 .02			2 0 9	329
N0271				.20												27
N0273				.20												94
N0274	13.0	°		.20	*	*										107
V 81	12.86		13.9												1733	87
N0275	13.0	13.0		.20	.49	.33		.41				1.17			0 2 35	1819
V 81	13.21	.15	13.5	12.70	.06	.07		-.39				2 .01	.94		1747	86
I0056				.20											2 3 8	1833
															6085	86
															0 1 30	6147
N0278	11.6	11.51	10.9	.54	0.66	-.05	0.69	0.04	.53			1.21			642	884
I0056A	11.86	.06	13.0	10.96	.02	.04	.03	.04	-.14			1 .01	2.58		1 3 19	242
A0049-16				.20											12565	12627
N0279				.20											0 1 30	62
N0289	12.1			.21											4050	46
	11.81		14.2												0 1 200	4155
A0050+21				.25											1811	105
A0051-73	1.5*	2.795		.35	0.50				.36	3.83	.47*	5.47	4.83		0 1 69	1793
A0052-19	2.08	.14	14.3	2.21	.04					2 1 0		3 .01	.68		0 1 69	-18
N0300	11.3*	8.705		.22	*	*						3.00			6949	7136
N0309	9.68	.07	14.7	8.38								2 .01	.69		0 2 43	187
	12.5	12.40	13.9	.20	0.61	0.00	0.68	0.14							150	-30
	12.17	.09	14.5		.05	.05	.03	.03							2 2 5	-180
A0054+23				.26												33
A0054+43				.45												97
N0321				.20												-48
N0315				.29						2.26	.23*					70
N0327				.20						3 5 2	.23*					89
N0329				.20												
A0055+48				.57												89
N0326.		14.35	14.1	.27	1.16	0.73	1.18	0.77	.96	2.20	.75		-2.77		6813	89
42 35		.08	15.2	13.87	.04	.06	.03	.04	.73	7 5 4	.82				1 1 15	7053
A0055+36				.35											14280	240
A0056-19				.20											0 2 35	14479
															6135	199
															1 1 9	6356
A0057+31		°		.30	*	*										221
N0337	12.2	12.08	12.5	.20	0.45	-.13	0.47	-.10	.37						4677	31
A0057-33	12.11	.06	13.8	11.76	.02	.02	.02	.02	-.19						0 1 220	4687
I0065	9.0*			.22											1695	210
A0058+07				.54											0 1 33	1773
				.21												78
N0337A				.20								.83				-33
N0352				.20								1 .01			2212	238
A0059+30				.30											1 0 10	2348
12 2				.25											413	136
N0354															0 1 83	489
N0357	13.0	12.90	13.3	.20	1.10	0.60	1.13	0.66	1.01							76
	12.74	.06	14.5	12.57	.04	.04	.03	.03	.54						10315	90
N0365				.22											0 1 185	10521
I1613	10.4	9.995		.21	0.60	*	*	.55							4878	206
A0102-06	9.92	.06	15.2	9.75	.03							2.38	.87		0 2 43	5061
A0103+31	12.8	*	14.9	.20	*							2 .01			2541	183
	12.21			.30											0 1 50	2621
N0375				.31	*											80
42 38																205
															6011	6218
															0 1 40	207

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	(1950) Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log A _e m.e. (14)
N0379	1 4.49	32 15.2	126.80	328.6	.L.....	-2	P200C			1.25	.25	1.19	0.60
	5.56	31.8	-30.23	5.9			3.4			.069	.063	1.23	.03
N0380	1 4.52	32 13.0	126.81	328.6	.E.2...	-5	P200C			1.20	.06	1.18	0.70
	5.56	31.8	-30.25	5.8			2.5			.069	.065	1.23	.04
N0382	1 4.63	32 8.2	126.84	328.5	.E.0...	-5	P200C			.57	.00	.57	*
	5.56	31.8	-30.35	5.8			2.3			.050	.050	.62	
N0383	1 4.64	32 8.7	126.84	328.5	.LA.-*	-3	P200C			1.36	.07	1.35	0.9
	5.56	31.8	-30.34	5.8			3.8			.071	.071	1.39	.05
N0384	1 4.65	32 1.6	126.86	328.4	.E.3...	-5	P200C			1.05	.11	1.03	0.55
	5.56	31.8	-30.46	5.8			3.1			.051	.054	1.08	.04
N0385	1 4.68	32 3.2	126.86	328.4	.LA.-*	-3	P200C			1.17	.06	1.15	0.73
	5.56	31.8	-30.43	5.8			3.4			.051	.054	1.19	.06
N0386	1 4.75	32 5.7	126.87	328.5	.E.3.*	-5*	P200C			.93	.05	.92	0.4
	5.56	31.8	-30.39	5.8			2.9			.073	.088	.97	.09
N0388	1 5.01	32 2.6	126.94	328.4	.E.3.*	-5*	P200C			.89	.06	.88	0.5
	5.56	31.8	-30.43	5.7			2.8			.073	.088	.93	.09
N0406	1 5.72	-70 8.6	300.92	227.4	.SASS*	5	S030V			1.58	.40	1.49	
	3.40	31.8	-47.19	15.8			2.5			.079	.050	1.52	
A0106+01	1 6.1	1 23	131.83	299.0	.S..6*	6*	P048N			1.59	.89	1.38	
	5.17	31.8	-60.92	-2.8			1.9			.039	.038	1.40	
I0079	1 6.36	-16 12.9	143.67	281.9	.LA.-..	-3	P048C			.82	.00	.82	
	4.97	31.8	-78.11	-7.5			1.2			.075	.100	.85	
I0080A	1 6.38	-15 40.5	142.87	282.4	.E.2.\$P	-5\$	P048C			.84	.00	.84	
	4.77	31.8	-77.19	-7.4			1.3			.075	.100	.87	
I0080B	1 6.38	-15 40.4	142.87	282.4	.LA.-*P	-3	P048C			.61	.14	.58	
	4.97	31.8	-77.60	-7.4			.7			.075	.100	.61	
N0403	1 6.47	32 29.3	127.26	329.0	.S..1*	1*	P048C			1.32	.43	1.22	
	5.58	31.8	-29.97	5.5			1.8			.037	.036	1.26	
N0404	1 6.65	35 27.1	127.04	331.9	.LAS-*	-3	W100V	E P		1.64	.02	1.63	1.05
	5.63	31.7	-27.01	6.2	E 0		4.1		5V5	.049	.028	1.68	.05
A0107+32	1 7.2	32 5	127.48	328.6	.S.....		P048N			1.36	.07	1.35	
	5.58	31.7	-30.36	5.3			2.2			.071	.071	1.38	
A0107+42	1 7.3	42 50	126.57	339.1	.SB.6\$	6*	P048N			1.38	.56	1.25	
	5.78	31.7	-19.64	8.0			1.8			.039	.038	1.28	
A0107+49	1 7.75	49 20.1	126.14	345.5	.I..9*	10*	P048N			1.38	.03	1.37	
D 9	5.94	31.7	-13.15	9.4	\$	9*	2.3			.071	.071	1.40	
N0407	1 7.83	32 51.5	127.55	329.4	.S..1\$	1\$	P048C			1.30	.51	1.18	
	5.59	31.7	-25.53	5.3			1.7			.044	.043	1.22	
N0418	1 8.2	-30 29	250.43	267.9	.SB55..	5	P048C			1.37	.04	1.36	
	4.76	31.7	-84.79	-11.1			2.3			.061	.058	1.38	
N0410	1 8.20	32 53.0	127.64	329.4	.LB...*	-2*	P048C			1.41	.19	1.36	
	5.59	31.7	-29.54	5.3			2.2			.062	.051	1.40	
I1637	1 8.6	-30 41	251.65	267.7	.SAT4*	4	P048C			1.39	.10	1.28	
	4.76	31.7	-11.2				2.1			.061	.058	1.30	
I1639	1 9.2	-0 55	134.22	297.0						.99	.05	.98	
IK562	5.15	31.6	-63.08	-4.2						.071	.071		
A0109+01	1 9.3	-1 55	134.67	296.0									
MK563	5.13	31.6	-64.06	-4.5									
N0434	1 10.2	-58 31	297.69	239.5	.SXS2..	2	R074V		3	1.29	.22	1.24	
	4.04	31.6	-58.66	-15.6			2.9			.091	.058	1.27	
N0428	1 10.38	0 42.9	134.24	298.6	.SXS9..	9	W100V	I L*AF*	2	1.61	.10	1.58	1.24
	5.17	31.6	-61.42	-4.1	S SP	6	3.9	S P AF		.032	.024	1.59	.04
N0434A	1 10.5	-58 29	297.60	239.5	.SB50P/	0	R074V			1.06	.44	.96	
	4.04	31.6	-58.69	-15.6			2.2			.183	.120	.99	
N0440	1 10.9	-58 33	297.52	239.4	.SAS4*	4*	R074V			1.01	.20	.96	
	4.03	31.6	-58.62	-15.6			2.4			.105	.067	.98	
A0111+07	1 11.2	7 31	132.55	305.2									
MK564	5.25	31.6	-56.67	-2.4									
N0439	1 11.44	-32 0.7	257.79	266.5	.LAR0\$	-2	P048C						
	4.72	31.6	-83.29	-12.1	E 3								
A0111+42	1 11.5	42 17	127.44	338.7	.SXT5..	5	P048N			1.22	.20	1.17	
	5.80	31.5	-20.12	7.1			1.8			.039	.038	1.21	
N0442	1 12.09	-1 17.2	135.94	296.8	.S..0./	0	W060V		3V5	1.08	.10	1.04	
	5.14	31.5	-63.31	-5.0			2.3			.045	.042	1.07	
A0112+32	1 12.3	-32 32	259.92	266.0	.SXS5*	5	P048C			1.20	.03	1.19	
	4.71	31.5	-82.80	-12.4			1.9			.061	.058	1.21	
I1653	1 12.3	33 7	128.60	329.9	.S...*		P048N			1.03	.05	1.02	
	5.62	31.5	-29.23	4.5			1.6			.039	.038	1.05	
N0447	1 12.84	32 48.4	128.76	329.6	.SB51..	1	P048C			1.41	.01	1.41	
	5.62	31.5	-29.53	4.3			2.4			.046	.045	1.45	
N0450	1 12.95	-1 7.5	136.34	297.0	.SXS6*	6*	W060V			1.51	.09	1.49	1.20
	5.14	31.5	-63.11	-5.2	S	8	3.3	SD F	3V5	.033	.027	1.51	.04
N0449	1 13.32	32 49.5	128.88	329.7	PS...\$		M082V			.84	.14	.81	0.36
MK 1	5.62	31.4	-29.50	4.2			2.2			.061	.058	.84	.03
I0089	1 13.5	4 2	134.60	302.0	RLX....	-2	P048N			1.36	.09	1.34	
MK565	5.21	31.4	-58.02	-3.9			2.2			.051	.058	1.37	
A0113+33	1 13.5	33 9	128.88	330.0									
	5.63	31.4	-29.17	4.3									
A0113+32	1 13.6	-32 44	259.57	265.9	.SAT7*	7	P048C			1.05	.00	1.05	
	4.69	31.5	-82.47	-12.7			1.7			.061	.058	1.06	
A0115+11	1 15.5	11 7	133.36	309.0	.SBR6..	6	P048N			1.41	.17	1.37	
	5.30	31.3	-50.95	-2.4			2.2			.039	.038	1.39	
A0116+04A	1 16.5	4 4	135.97	302.3									
MK566	5.21	31.3	-57.84	-4.6									
N0467	1 16.59	3 2.3	136.41	301.3	.LAS0P\$	-2	P200V	E1 K		1.38	.01	1.38	0.97
	5.20	31.3	-58.84	-4.9			4.2		03	.059	.042	1.41	.04
A0116+04B	1 16.7	4 19	135.97	302.5									
MK567	5.21	31.3	-57.59	-4.6									
A0117+07	1 17.0	7 55	134.87	306.0	.SBT3..	3	P048N			1.10	.04	1.09	
	5.26	31.3	-54.04	-3.6			1.7			.039	.038	1.11	
N0470	1 17.16	3 8.9	136.63	301.4	.SAT3..	3	P200V	SD *F		1.48	.18	1.44	0.95
	5.20	31.3	-58.71	-5.0	S 5 K		4.2	SI *AF	5 S	.038	.030	1.46	.04
N0473	1 17.25	16 17.0	132.75	314.1	.SKR0*	0*	W060V	D *G *		1.35	.19	1.30	
	5.38	31.3	-45.78	-1.3	E 4 P		2.9		3V5	.060	.049	1.33	
N0474	1 17.53	3 9.3	136.81	301.5	PLAS0..	-2	P200C			1.90	.04	1.89	1.40\$
	5.20	31.2	-58.68	-5.1	E T		4.2			.032	.043	1.92	.05
N0491A	1 17.6	-34 8	262.41	264.6	.SX.7*	7*	P048C	SE *K *	04 S	1.48	.28	1.41	
	4.64	31.3	-80.89	-13.7			2.0			.158	.095	1.42	
A0118+15	1 18.48	15 26.0	133.37	313.3	.SB.5*	5	P048C			1.03	.12	1.00	
	5.37	31.2	-46.57	-1.9			1.5			.061	.058	1.02	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D25 m.e. (11)	Log R25 m.e. (12)	Log D(0) Log Do (13)	Log Ae m.e. (14)
A0118+12 D 10 N0485	1 18.67 5.32 1 18.8	12 9.0 31.2 6 45	134.28 -49.80 136.01	310.2 -2.8 305.0	.SX.9.. SX .S.....	9 8*	P048F P048N 1.7			1.38 .046 1.29	.29 .045 .43	1.31 1.32 1.19	
N0491	1 19.1 4.63	-34 19 31.2	261.84 -80.54	264.5 -14.1	.SBR3S.	35	S030V 2.1			1.17 .112	.04 .071	1.16 1.18	
N0488	1 19.18 5.22	4 59.8 31.2	136.83 -56.79	303.3 -5.0	.SAR3.. S 2	3 1	P200V 4.7	S K S GK	3*	1.72 .030	.11 .022	1.69 1.77	1.20 .03
N0493	1 19.59 5.17	0 41.1 31.1	138.92 -60.97	299.2 -6.3	.SBS6*/	6	P048C 2.3			1.58 .039	.43 .038	1.48 1.50	1.10 .04
N0497	1 19.85 5.14	-1 8.2 31.1	140.03 -62.72	297.5 -6.8	.SRT4*.	4	P200C 3.5			1.38 .039	.33 .038	1.31 1.33	
A0119+26A MK355	1 19.92 5.55	26 36.4 31.1	131.50 -35.48	324.1 1.1									
A0119+26B MK356	1 19.95 5.55	26 36.3 31.1	131.51 -35.48	324.1 1.1									
A0120+01 MK569	1 20.0 5.18	1 37 31.1	138.67 -60.04	300.1 -6.1									
N0495	1 20.12 5.67	33 12.7 31.1	130.44 -28.94	330.4 3.0	PSP50P*	0	P048C 1.8			1.18 .038	.16 .035	1.14 1.18	
N0499	1 20.37 5.67	33 12.0 31.1	130.50 -28.94	330.5 2.9	.L...-..	-3	P048C 2.1			1.30 .069	.10 .066	1.28 1.33	0.82 .03
A0120+34	1 20.7 5.70	34 19 31.1	130.41 -27.83	331.5 3.2						.48 .050	.00 .050	.48	
N0509	1 20.78 5.28	9 10.4 31.1	136.00 -52.63	307.5 -4.2	.SRS3S/	3	P048C 1.7			1.23 .044	.37 .041	1.14 1.16	
N0507	1 20.84 5.67	32 59.7 31.1	130.65 -29.13	330.3 2.8	.LAR0..	-2	P200C 4.4			1.63 .071	.00 .071	1.63 1.67	1.25 .03
N0508	1 20.86 5.67	33 1.2 31.1	130.65 -29.11	330.3 2.8	.E.0.*.	-5*	P200C 3.5			1.20 .071	.00 .071	1.20 1.25	0.80 .05
N0514	1 21.41 5.34	12 39.5 31.0	135.15 -49.18	310.9 -3.3	.SXT5..	5	W100V 3.8	C AF	4	1.54 .031	.08 .025	1.52 1.54	1.2 .07
N0516	1 21.51 5.29	9 17.5 31.0	136.25 -52.47	307.6 -4.3	.SB.3S/	3	P048C 1.6			1.21 .038	.41 .036	1.12 1.14	
N0518	1 21.67 5.28	9 4.3 31.0	136.39 -52.68	307.4 -4.4	.S..2*/	2*	P048C 1.7			1.28 .038	.40 .035	1.18 1.20	
N0519	1 21.93 5.13	-1 54.1 31.0	141.59 -63.31	296.9 -7.5	.E.1.*.	-5*	P048C						
N0521	1 21.99 5.18	1 28.3 31.0	139.70 -60.06	300.1 -6.6	.SBR4.. SX3 N -*	4	W100V 3.8	B K SX F	3VS	1.53 .034	.03 .029	1.52 1.54	
N0520	1 22.00 5.21	3 31.9 31.0	138.72 -58.06	302.1 -6.1	.P.....	0*	P200V 4.4	I P F * I P K *	2	1.68 .037	.35 .030	1.59 1.62	1.20 .03
N0522	1 22.14 5.29	9 44.0 31.0	136.35 -52.01	308.1 -4.3	.S..3*/	3*	P048C 1.8			1.44 .036	.70 .035	1.27 1.29	
N0530	1 22.15 5.13	-1 50.9 31.0	141.67 -63.24	296.9 -7.6	.LB.0*.	-2	P048C 1.7			1.28 .042	.48 .045	1.17 1.20	
N0524	1 22.17 5.29	9 16.7 31.0	136.51 -52.45	307.7 -4.5	.LAT... E 1	-1	P200V 4.4	D K	5	1.51 .046	.01 .038	1.51 1.54	1.05 .07
I1696	1 22.33 5.13	-1 52.7 31.0	141.79 -63.26	296.9 -7.6	PLAS-*	-3	P048C 1.8			1.14 .071	.04 .071	1.13 1.16	
N0523	1 22.5	33 46	130.91	331.1	.P.....		P200C 3.6			1.49 .050	.54 .050	1.37 1.39	
N0532	1 22.66	9 0.3	136.80	307.5	.S..3*/	3*	P048C 2.0			1.44 .043	.45 .040	1.34 1.36	
N0538	1 22.88	-1 48.6	142.03	297.0	.S..3*.	3*	P048C 1.13			.26 .046	.040 .045	1.36 1.09	
N0539	1 22.9	-18 25	165.74	280.7	.SRT5..	5	P048C 2.0			1.25 .061	.05 .058	1.24 1.26	
N0533	1 22.95	1 30.0	140.15	300.2	.E.3.*.	-5*	W100V 3.8	E4 K E4 K		1.57 .065	.15 .053	1.54 1.57	1.15 .09
N0535	1 22.98	-1 40.2	142.00	297.2	.L...*/	-2*	P048C 1.3			1.11 .042	.52 .045	.98 1.01	
N0541	1 23.13	-1 38.3	142.09	297.2	.L...*	-3*	P200C 4.0			1.43 .071	.00 .071	1.43 1.46	1.10 .05
N0543	1 23.29	-1 33.2	142.09	297.3	.E.6.*.	-5*	P048C .9			.84 .075	.32 .100	.77 .80	.35 .09
N0545	1 23.44	-1 36.0	142.19	297.3	.LA...*	-3	P200V 4.2			1.48 .060	.16 .044	1.44 1.47	
N0547	1 23.46	-1 36.3	142.21	297.3	.E.1...*	-5	P200V 3.9			1.23 .065	.01 .051	1.23 1.26	.78 .05
N0548	1 23.49	-1 29.1	142.15	297.4	.L...*	-3*	P048C 1.9			1.17 .071	.04 .071	1.16 1.19	
N0536	1 23.6	34 27	131.05	331.8	.SBR3..	3	P048N 2.4			1.57 .039	.30 .038	1.50 1.53	
A0123+06	1 23.7	-6 20	145.95	292.7	.S..6*.	6*	P048N 1.6			1.49 .039	.75 .038	1.31 1.33	
A0123+31	1 23.75	31 21.2	131.63	328.9	.SXT4*.	4	M082V 2.7			1.08 .061	.10 .058	1.06 1.09	
I1703	1 23.86	-1 53.9	142.61	297.0	.LBT*..	-1	P048C 2.1			1.36 .071	.21 .071	1.32 1.35	
N0550	1 24.13	1 45.8	140.58	300.6	.S..3*.	3*	P048V 1.7			1.24 .045	.31 .042	1.17 1.19	
I0115	1 24.20	18 57.4	134.39	317.1						.79 .075	.00 .100	.79	
I1706	1 24.5	14 31	135.71	312.9	.S...P\$		P048N 1.7			1.13 .039	.12 .038	1.10 1.12	
N0558	1 24.72	-2 13.8	143.29	296.7	.E.5.*.	-5*	P048C .9			.84 .050	.34 .050	.76 1.37	
A0124+31	1 24.8	31 18	131.90	328.9	.S..6*.	6*	P048N 2.0			1.52 .039	.64 .038	1.37 1.39	
A0124+18 MK359	1 24.83	18 55.1	134.60	317.1	.P.....		P048N 1.2			.85 .039	.07 .038	.83 .86	
N0560	1 24.88	-2 10.4	143.34	296.8	.L...*/	-3	P048C 1.8			1.36 .041	.50 .042	1.24 1.27	.70 .07
N0564	1 25.25	-2 8.3	143.51	296.9	.E.2.*.	-5*	P048C 2.0			1.26 .050	.05 .051	1.25 1.28	.85 .05
I0115	1 25.37	-2 18.1	143.68	296.7	.SBR0..	0	P048C 1.7			1.21 .039	.29 .038	1.14 1.17	
N0562	1 25.4	48 7	129.26	345.1	.SAT5..	5	P048N 1.9			1.17 .039	.06 .038	1.15 1.20	

NGC, IC, A Zw, VV (14)	Magnitudes				Color indices					Radio and 21 cm				Velocities		Appendices (30)
	m_B m_C (15)	B_T m_B (16)	m_B m_{25} (17)	A_B B_T (18)	$(B-V)_T$ $m.e.$ (19)	$(U-B)_T$ $m.e.$ (20)	$(B-V)_e$ $m.e.$ (21)	$(U-B)_e$ $m.e.$ (22)	$(B-V)_e^2$ $(U-B)_e^2$ (23)	$\log S_R$ $N_N N_+$ (24)	α_- α_+ (25)	$\log S_H$ $N A_{21}$ (26)	RI HI (27)	V $N_N N_0 m.e.$ (28)	V_0 ΔV (29)	
A0118+12				.23								.86		644	782	
N0485				.22								1 .01		1 0 10	138	
N0491	13.0			.21											119	
N0488	13.22		13.8													
N0493	11.8	11.15	12.6	.22	0.86	*	0.95	0.59	.78					2180	2292	PT
	11.25	.06	14.3	10.83	.1		.1	.04						0 1 150	112	
		12.95	13.9	.21	0.49	-1.10	0.55	-.05								
		.09	14.6		.04	.04	.03	.03							95	
N0497				.21												
A0119+26A				.28										8071	8159	P
A0119+26B				.28										0 2 49	88	
A0120+01				.21										9208	9390	
														0 1 105	182	
N0495		14.2	.32		1.04	.29								9076	9258	
	.15	14.5	13.71		.06	.07			.90					0 2 43	182	
N0499		13.05	12.6	.32	1.03	0.70	1.05	0.72	.91					10050	10148	
A0120+34		.06	14.2	12.64	.03	.06	.02	.04	.64					0 1 200	98	
12 4		15.2	.33		.51	-1.10								4114	4313	
N0509		.15		.22	.06	.07								0 1 50	199	
														4375	4574	
N0507		12.15	13.9	.32	0.99	*	1.01	0.61	.87	1.08*	1.405		2.145	0 1 50	198	P
V207		.08	15.2	11.76	.05		.02	.04		1 1 1	.905					
N0508		13.90	13.4	.32	1.06	0.40	1.07	0.43								
V207		.08	14.9		.03	.06	.03	.06							198	P
N0514	12.4	12.5	14.0	.23	0.58		0.62		.50			1.14		2477	2615	
N0516	12.02	.1	14.8	12.19	.03		.04					1 .01	1.53	1 2 12	138	
N0518				.22											126	
N0519				.21											125	
N0521	13.0	12.5		.21										5277	5360	
	12.39	.15	14.9	12.23										0 1 185	83	
N0520	12.4	12.05	13.5	.22	0.85	0.20	0.78	0.21	.72	1.40*	.095	1.23	1.565	5003	5099	S
V231	11.96	.06	14.4	11.55	.02	.05	.02	.03	.11	1 1 4	1.04*	2 .03	1.89	0 1 65	96	
N0522				.22										2168*	2272	PT
N0530				.21										2 3 11	104	
N0524	12.0	11.5	12.2	.22	0.95	*	1.02	0.65	.88					4961	5044	
11696	11.65	.1	13.9	11.24	.04		.02	.03						0 1 185	83	PT
				.21										2470	2595	
N0523				.33										0 1 65	125	
42 45														5713	5796	
N0532				.22										0 1 185	83	
N0538				.21										4732	4931	P
N0539				.22										0 1 150	199	
N0533	13.0	12.5	13.7	.21	*	*	1.07	0.53						5343	5426	
	12.41	.13	15.0	12.21			.05	.06						0 1 185	83	
N0535				.21										9657	9672	
N0541		13.00	14.0	.21	0.96	0.43	1.00	0.47	.86					0 1 25	15	
N0543		.08	15.0	12.71	.04	.06	.04	.06	.41					5008	5104	
N0545	14.4	11.6	.21		1.06		1.07		.96					0 1 42	96	
N0547	.1	12.8	14.11		.04	*	.04	*		2.74	.89			4884	4967	P
	.21													5337	5420	
N0548	13.35	12.7	.21		1.04	0.58	1.05	0.63	.94	321010	1.02			0 1 185	83	
	.09	14.5	13.06		.04	.06	.03	.06	.56					5183	5267	
N0536				.33										0 1 185	83	P
A0123+06				.21										5451*	5534	P
A0123+31				.31										0 2 40	83	
11703				.21										5378	5461	P
N0550				.21										0 2 42	83	
10115	15.3	.15		.25	1.11	.31				2.18	.43			5277	5361	
11706				.23	.06	.07				5 3 4	.54			0 1 185	84	
N0558				.21										5160	5360	S
A0124+31				.31										0 1 45	200	
A0124+18				.25												
N0560	13.85	12.8	.21		0.96	0.46	0.94	0.50	.84					13524*	13716	S
N0564	.08	14.3	13.46		.03	.04	.04	.04	.42					0 2 43	192	
10119	13.45	13.2	.21		0.97	0.62	0.99	0.67	.87					5633	5715	S
	.08	14.6	13.15		.03	.06	.03	.06	.60					0 1 185	82	
N0562				.58												
														0 1 185	80	
														5699*	5779	
														0 2 74	80	
														6148	6227	
														0 1 185	79	
														10259	10484	
														1 1 14	225	

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log D ₀ (12)	Log Ae m.e. (13)	
N0565	1 25.62	-1 33.8	143.31	297.4	.S..1*	1*	P048C			1.20	.44	1.09		
	5.13	30.8	-62.71	-8.3			1.5			.039	.038	1.11		
I0120	1 25.66	-2 10.6	143.75	296.8	.E.5.*	-5*	P048C							
	5.13	30.8	-63.29	-8.5										
N0570	1 26.43	-1 12.5	143.49	297.8	PSBT1*	1	P048C			1.40	.15	1.36		
	5.14	30.8	-62.31	-8.4			2.2			.071	.071	1.38		
I0127	1 27.28	-7 14.3	149.00	292.0	.S..3*/	3*	P048C			1.32	.50	1.20		
	5.05	30.7	-67.89	-10.2			1.7			.055	.044	1.23		
A0127+25	1 27.35	25 36.5	133.73	323.7	.SB.9..	9	P048N			1.27	.18	1.23		
D 11	5.57	30.7	-36.19	-8	SA	9*	1.9			.039	.038	1.25		
N0578	1 28.09	-22 55.5	188.32	276.4	.SXT5..	5	W100V	BS *AF		1.68	.18	1.64	1.30	
	4.80	30.7	-80.09	-14.0	S 5	3	4.0		3VS	.028	.020	1.66	.05	
N0584	1 28.84	-7 7.6	149.82	292.2	.E.4...*	-5	W100V	E4 K		1.58	.20	1.53	.96	
	5.05	30.7	-67.63	-10.6	E 4		3.8	E4 K	D4 S	.069	.041	1.56	.04	
N0586	1 29.10	-7 9.1	150.00	292.2	.SAS1*5	15	W100V			1.21	.30	1.14		
	5.05	30.6	-67.63	-10.6			2.9		4VS	.075	.053	1.16		
N0596	1 30.36	-7 17.3	150.89	292.1	.E.2.P..	-5	P048C			1.54	.20	1.49	1.00	
	5.05	30.6	-67.63	-11.0	E 2		2.5	ED K		.129	.066	1.52	.04	
N0600	1 30.58	-7 34.1	151.34	291.9	.SBT7..	7	P048C			1.54	.06	1.53		
	5.04	30.6	-67.86	-11.1			2.6			.051	.040	1.55		
N0598	1 31.05	30 23.9	133.62	328.5	.SAS6..	6	...V	S F	5	2.79	.20	2.74	2.42	
	5.68	30.5	-31.34	-1	S 5	4	5.0	S F		.021	.015	2.76	.04	
N0612	1 31.73	-36 44.9	261.67	262.4	.L...P/	-2	P048C						.07	
	4.50	30.5	-77.01	-17.0										
N0613	1 31.98	-29 40.3	229.07	269.7	.SBT4..	4	W100V	BS *F	25	1.76	.10	1.74		
	4.65	30.5	-80.30	-16.0	SK4	2	4.2		5 S	.030	.023	1.76		
A0132+04	1 32.45	4 7.4	143.07	303.4	.I..9..	10	P048F			1.58	.27	1.52		
D 12	5.22	30.4	-56.78	-8.4	S 9*		2.5			.050	.050	1.53		
N0615	1 32.59	-7 35.8	152.56	292.0	.SAT3..	3	P200V			1.60	.36	1.52		
	5.04	30.4	-67.67	-11.6	S 3	4	4.3	SD G	4	.040	.029	1.54		
N0625	1 32.9	-41 41	273.67	257.3	.SBS9*/	95	C060C			1.48	.36	1.40		
	4.36	30.4	-73.13	-17.7			3.0			.079	.049	1.41		
N0622	1 33.43	0 24.6	145.82	299.9	.SBT4..	4	P048C			1.31	.09	1.29		
MK571	5.16	30.4	-60.21	-9.7			2.1			.039	.038	1.31		
N0628	1 34.01	15 31.6	138.63	314.5	.SASS..	5	P200V	S FG	2	2.01	.03	2.01	1.72	
	5.41	30.3	-45.71	-5.4	S 5	1	5.0		3VS	.025	.017	2.03	.03	
N0646	1 35.8	-65 10	295.14	232.5	.SASSP.	5	E040C							
	3.20	30.3	-51.51	-18.7										
A0135+07	1 35.8	7 16	142.79	306.7	.SAT6..	6	P048N			1.35	.10	1.33		
	5.28	30.2	-53.53	-8.3			2.2			.046	.045	1.35		
N0636	1 36.60	-7 45.9	155.07	292.1	.E.3...*	-5	W100V		3	1.37	.09	1.35		
	5.03	30.2	-67.36	-12.6	E 1		3.5	E3 K		.112	.055	1.38		
A0137+15	1 37.47	15 39.1	139.73	314.9	.I..9..	10	P048N			1.67	.09	1.65		
D 13	5.42	30.1	-45.37	-6.1	I	9	2.8			.050	.050	1.66		
N06438	1 38.4	-75 16	298.83	221.9										
	1.68	30.2	-41.73	-18.0										
N0658	1 39.5	12 20	141.78	311.9	.S..3..*	3	P048N			1.51	.25	1.45		
	5.37	30.0	-48.42	-7.6			2.3			.039	.038	1.47		
A0140+12	1 40.1	12 54	141.74	312.5	.IB...*	10*	P048N			1.33	.15	1.29		
	5.38	30.0	-47.84	-7.6			2.1			.039	.038	1.30		
N0660	1 40.35	13 23.3	141.61	313.0	.SBS1P.	1	W060V			1.96	.35	1.88	1.65	
	5.39	30.0	-47.35	-7.5			3.9			.037	.029	1.91	.04	
I1723	1 40.6	8 38	143.95	308.4	.S..3..*	3	P048N			1.54	.55	1.41		
	5.30	29.9	-51.86	-9.0			2.1			.039	.038	1.43		
N0643C	1 41.08	-75 31.3	298.70	221.6	.S..6.*	6*	E040H							
	1.53	30.0	-41.44	-18.1										
A0141+11	1 41.1	11 55	142.53	311.6	.S..8P*	8*	P048N			1.15	.31	1.08		
MK572	5.36	29.9	-48.70	-8.1			1.6			.039	.038	1.10		
N0664	1 41.2	3 59	146.88	303.9	.S..3..*	3*	P048N			1.25	.07	1.23		
	5.23	29.9	-56.18	-10.5			2.0			.039	.038	1.25		
A0141+16	1 41.23	16 48.8	140.51	316.3	CI...P*	11*	P200C			.70	.00	.70		
MK360	5.45	29.9	-44.01	-6.6			2.5			.075	.100	.71		
A0141+02	1 41.4	2 6	148.25	302.2	.LX....	-2	P048N			1.27	.02	1.27		
MK573	5.19	29.9	-57.92	-11.1			2.1			.051	.058	1.30		
N0661	1 41.41	28 27.3	136.72	327.4	.LA...*	-2*	P048C			1.34	.09	1.32		
	5.69	29.9	-32.75	-2.9			2.2			.063	.063	1.36		
N0662	1 41.6	37 26	134.41	335.8	.S...P.		P048N			.99	.20	.95	0.6	
	5.91	29.9	-24.00	.1			1.4			.039	.038	.98	.1	
A0142+16	1 42.07	16 51.4	140.76	316.4										
MK361	5.45	29.8	-43.91	-6.8										
A0143+43	1 43.0	-43 51	273.07	255.1	.IBS9..	10	P048C							
	4.22	29.8	-70.28	-19.7										
N0668	1 43.4	36 12	135.11	334.8	.S..3..*	3	P048N			1.36	.14	1.33		
	5.89	29.7	-25.12	-6			2.2			.039	.038	1.37		
N0669	1 44.3	35 18	135.53	334.0	.S..2..*	2	P048N			1.53	.65	1.37		
	5.87	29.7	-25.95	-1.1			2.0			.039	.038	1.41		
N0670	1 44.59	27 38.2	137.77	326.8	.LA....	-2	P048C			1.39	.33	1.32	.90	
	5.68	29.7	-33.37	-3.8	E 4		2.0	E7 *K		.046	.044	1.36	.05	
I1727	1 44.68	27 5.1	137.96	326.3	.SBS9..	9	P200V			1.79	.33	1.71	1.50	
	5.67	29.7	-33.90	-4.0			4.7		1	.029	.022	1.73	.05	
N0672	1 45.09	27 11.1	138.04	326.4	.SBS6..	6	P200V	B A	1	1.82	.39	1.73	1.37	
	5.68	29.6	-33.78	-4.1	SBS	5	4.7	B *AF	1	.026	.019	1.75	.04	
A0145+16	1 45.4	-16 57	177.20	283.3	.SAS5..	5	P048C			1.20	.14	1.16		
	4.85	29.6	-73.30	-16.8			1.8			.061	.058	1.18		
N0673	1 45.7	11 17	144.46	311.3	.SKS5..	5	P048N			1.38	.10	1.36		
	5.36	29.6	-48.95	-9.4			2.2			.039	.038	1.38		
A0145+12	1 45.8	12 21	143.96	312.4	PSBS1..	1	P048N			.99	.10	.96		
MK575	5.38	29.6	-47.93	-9.1			1.5			.050	.050	.99		
N0685	1 45.9	-53 2	284.49	245.4	.SKRS..	5	S030V		2	1.61	.01	1.61		
	3.83	29.6	-62.28	-20.4			3.0			.120	.075	1.63		
A0145+12	1 45.98	-12 37.9	167.89	287.8	.IXT9..	10	P200C			1.45	.07	1.43		
D 14	4.93	29.6	-70.11	-16.0			3.9			.061	.058	1.44		
N0676	1 46.34	5 39.6	147.89	306.0	.S..0*/	0*	W060V		3VS	1.63	.45	1.52		
	5.26	29.6	-54.15	-11.3			3.2			.035	.031	1.55		
A0146+27	1 46.4	-27 48	218.14	272.1										
	4.62	29.6	-77.28	-18.9										
A0146+05	1 46.5	5 23	148.13	305.7										
MK576	5.25	29.6	-54.40	-11.4										
N0678	1 46.65	21 45.0	140.29	321.4	.SBS3*/	3*	P048C			1.70	.66	1.55		
	5.56	29.5	-38.91	-6.2			2.3			.032	.028	1.58		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _c (15)	B _T m.e. (16)	m ₂₈ m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N ₂ (24)	α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₂ m.e. (28)	V ₀ ΔV (29)			
N0565				.21											4409	4491		
I0120				.21											0 1 185	82		
N0570				.21											4845	4924		
I0127				.21											0 1 185	79		
A0127+25				.28											5447	5529		
															0 1 185	82		
																58		
																174		
N0578	11.7	11.50	13.5	.22	0.57	-.14	0.61	-.06	-.47			1.51			1696*	1689	PT	
N0584	11.34	.08	14.3	11.13	.03	.05	.02	.04	-.21			1.01			1 1 13	-7		
N0586	11.25	.06	13.7	11.06	.03	.03	.02	.03	.47	2.19	.90		1.66		1811	1868		
		14.1		.21	.94	.23				4 2 5	1.17		.06		0 2 47	57		
N0596		.15	14.2		.06	.07												
	12.2	11.78	12.3	.22	0.91	0.44	0.93	0.48	.84							57		
N0600	11.74	.05	14.0	11.53	.02	.03	.02	.02	.40						2049	2104		
		13.0		.22	.59	-.09									0 1 65	55		
		.15	15.4		.06	.07										54		
N0598	7.8	6.265	13.9	.31	0.55	-.10	0.58	*	-.44	2.32	.77	3.74	5.00		-183	2	PT	
N0612	6.43	.03	14.6	5.79	.02	.02	.05		-.18	8 6 1	.875	6 .01	1.43		7 3 4	185		
N0613		14.15	13.1	.21	1.00	0.45	1.02	0.48		2.89	.69				9115	9049		
	11.1	.09		.20	.04	.04	.04	.04		2 2 2	.69*				0 1 270	-66		
A0132+04	10.67	.12	14.2	10.50	.076	0.15	*	*	.69	1.48	.47*	1.06	2.41		1500	1462	P	
				.22	.05	.05			.09	2 3 4	.98	1 .01	3.41		1 2 18	-38		
N0615	12.6	12.3		.22	0.85	0.25	*	*	.72						1967	2065		
	12.28	.13	14.2	11.78	.05	.05			.13			1 .01			1 0 10	98	PT	
N0625	12.3			.22											1858	1910		
N0622	12.21		13.6	.22											0 1 75	52		
N0628	11.2*	9.75	13.8	.24	0.58		0.67		.51	1.32	.095	2.45	3.81		5400	-86		
N0646	9.77	.07	14.6	9.48	.03		.03			3 2 4	1.51	3 .01	.96		0 1 200	5483	PT	
				.30											655	83		
A0135+07				.23											4 2 5	138		
															8230	8061		
N0636	12.6	12.30		.22	0.97	0.44	*	*	.90						0 1 18	-169		
	12.34	.09	13.9	12.05	.04	.04			.40						4199	4306		
A0137+15				.25											0 1 54	107		
N06438				.37								1.21			1941	1989		
N0658				.24								1 .01			0 1 50	48		
A0140+12				.24											644	780		
															1 0 10	136		
N0660		11.5	15.2	.24	0.84	*	0.90	0.45		1.61	.735				2955	3078		
I1723		.13	15.3	.23	.04		.03	.05		1 3 2	.95*				0 1 42	123	PT	
N0643C				.37													126	
A0141+11				.24													109	
N0664				.23														
															5250	-197		
A0141+16		*		.25	*	*									0 1 200	5370		
32 33															5382	120		
A0141+02				.23											0 1 49	5473		
																91		
N0661				.30											7964	8101		
															0 2 43	137		
N0662		14.7	13.2	.38	0.41	-.13	0.48	-.07							5100	5183		
52 98		.2	14.0	.25	.04	.04	.04	.04							0 1 200	83		
A0142+16																		
ZCG																		
															8111	195		
A0143+43	13.3*			.22											0 2 70	8247		
																136		
N0668				.37													-101	
N0669				.36													191	
N0670	13.0	13.0	13.0	.30	0.87	0.16	0.88	0.20									188	
I1727	12.87	.1	14.0		.04	.04	.03	.03									168	
V338		12.10	15.1	.30	0.55	*	0.56	-.26	.41						362	528	PT	
		.09	15.1	11.50	.04		.04	.05							0 1 50	166		
N0672	11.9	11.35	13.7	.30	0.59	-.11	0.60	-.05	-.44			1.94			412	578	PT	
V338	11.40	.08	14.3	10.74	.03	.05	.02	.03	-.21			1 .02	.95		2 1 7	166		
A0145-16				.23											5194	5198		
															1 1 14	4		
N0673				.24											5211	5325		
A0145+12				.24											0 1 45	114		
N0685	12.7			.25											5265	5383		
	11.97		14.8												0 1 63	118		
																	P	
A0145-12				.23								.96			1618	1639	P	
N0676				.23							2 .01				2 0 9	21		
A0146-27		*		.21	*	*											93	
A0146+05				.23											9069	9029		
															0 1 124	-40		
N0678				.27											5400	5492		
															0 1 200	92	P	
																149		

NGC IC, A Mr, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D ₀) Log (D ₀) (13)	Log A _e m.e. (14)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
N0681	1 46.71	-10 40.5	164.84	289.8	.SX52/-	2	W100V	NS K	3*	1.44	.19	1.40	.95
	4.97	29.6	-68.46	-15.7	S 2		3.5		4VS	.030	.023	1.42	.03
N0679	1 46.8	35 32	136.02	334.4	.L...-*	-3*	P048N			1.36	.00	1.36	0.90
	5.89	29.5	-25.61	-1.5			2.3			.051	.058	1.41	.04
N0680	1 47.02	21 43.4	140.41	321.4	.LAS-*	-3	P048C			1.46	.07	1.44	
	5.57	29.5	-38.91	-6.3			2.4			.063	.053	1.48	
A0147-13	1 47.22	-13 4.3	169.41	287.4	.L...9..	10	P048F			1.22	.05	1.21	
D 15	4.92	29.5	-70.24	-16.4		9	2.0			.061	.058	1.22	
A0147-27	1 47.3	-27 58	218.91	272.0									
	4.62	29.5	-77.09	-19.1									
I1731	1 47.38	26 56.9	138.70	326.4	.SX55..	5	P048C			1.24	.18	1.20	
	5.68	29.5	-33.87	-4.6			1.9			.038	.036	1.23	
N0684	1 47.40	27 23.9	138.56	326.8	.S...3/	3	P048C			1.59	.65	1.44	
	5.69	29.5	-33.44	-4.5			2.1			.038	.036	1.47	
N0693	1 47.90	5 53.9	148.35	306.3	.S...05.	05	P048C			1.43	.27	1.37	
	5.26	29.5	-53.79	-11.6			2.2			.043	.039	1.40	
N0691	1 47.93	21 30.8	140.75	321.3	.SAT4..	4	P048C			1.54	.11	1.51	
	5.56	29.5	-39.05	-6.6			2.5			.033	.028	1.53	
N0694	1 48.21	21 45.1	140.74	321.5	.L...SP	-25	P048C			.91	.17	.88	
MC363	5.57	29.4	-38.81	-6.6			1.2			.042	.045	.92	
I0167	1 48.37	21 40.0	140.81	321.5	.SX55..	5	P200C			1.47	.18	1.43	
	5.57	29.4	-38.88	-6.6			3.9			.038	.030	1.45	
N0695	1 48.47	22 20.1	140.59	322.1	.L...SP	-25	P048C			.84	.04	.86	
	5.58	29.4	-38.23	-6.4			1.2			.050	.050	.82	
N0697	1 48.52	22 6.6	140.69	321.9	.SXR4*.	4	P048C			1.67	.42	1.59	
	5.58	29.4	-38.44	-6.5			2.5			.033	.027	1.60	
N0701	1 48.59	-9 57.0	164.67	290.6	.SBT5..	5	W060V	ISP A *		1.40	.29	1.33	.85
	4.98	29.4	-67.61	-16.0	S NK-		2.9			.033	.028	1.35	.05
I1738	1 48.66	-10 2.3	164.84	290.5	.SXR3..	3	W060V			1.09	.10	1.07	
	4.97	29.4	-67.67	-16.0			2.4			.061	.058	1.09	
N0702	1 48.78	-4 18.2	157.32	296.3	.SB54P.	4	P200C			1.17	.13	1.14	
	5.08	29.4	-62.86	-14.6			3.3			.049	.040	1.16	
A0149-17	1 49.05	17 56.5	142.50	318.0	.SB.5*.	5	P048N			1.32	.53	1.19	
D 16	5.49	29.4	-42.38	-8.0			1.7			.039	.038	1.21	
N0706	1 49.23	6 31.0	148.76	306.5	.S...3*.	3*	P048C			1.35	.11	1.32	
	5.27	29.4	-53.52	-11.8			2.2			.037	.034	1.34	
A0149-36	1 49.8	36 22	136.44	335.4	.SXT5..	5	P048N			1.19	.06	1.17	
	5.93	29.3	-24.65	-1.8			1.9			.039	.038	1.23	
N0703	1 49.83	35 54.3	136.58	335.0	.L...-*	-3*	P048N			1.17	.12	1.14	
	5.92	29.3	-25.09	-2.0			1.8			.071	.071	1.19	
N0708	1 49.9	35 55	136.59	335.0	.E.2...-	-5	P048N			1.52	.08	1.50	
	5.92	29.3	-25.08	-2.0			2.5			.071	.071	1.56	
I1743	1 50.2	12 28	145.41	312.8	.SB.1*.	1	P048N			1.33	.34	1.25	
	5.39	29.3	-47.46	-10.1			1.9			.039	.038	1.28	
N0720	1 50.57	-13 59.1	173.03	286.6	.E.5...-	-5	W060V	E6 K		1.64	.20	1.59	1.10
	4.90	29.3	-70.36	-17.4	E 3		3.1			.183	.091	1.63	.05
N0718	1 50.62	3 57.0	150.75	304.6	.SX51..	1	P200V	S P GK	3*	1.45	.05	1.43	
	5.23	29.3	-55.30	-12.8	S 3 N		4.3		5	.039	.032	1.46	
I1746	1 51.7	4 33	150.75	305.3	.S...3*.	3	P200C			1.27	.45	1.17	
	5.24	29.2	-54.65	-12.9			3.2			.042	.045	1.19	
N0721	1 51.77	39 8.4	136.07	338.1	.SBT4..	4	P048C			1.30	.21	1.25	
	6.03	29.2	-21.87	-1.2			2.0			.038	.037	1.29	
A0151-36	1 51.93	36 40.3	136.81	335.8	.RSB0..	0	P048N			.91	.06	.90	
MC 2	5.95	29.2	-21.1	-1.1			1.3			.039	.038	.95	
N0731	1 52.47	-9 15.5	165.55	291.6	.E.0...-	-5	P048C			1.24	.00	1.24	
	4.98	29.2	-66.48	-16.8			2.1			.183	.085	1.28	
A0152-06	1 52.7	6 21	149.89	307.1	.SAT3..	3	P048N			1.23	.09	1.21	
	5.28	29.1	-52.90	-12.6			1.9			.039	.038	1.23	
I0173	1 53.4	1 2	154.19	301.9	.SB53..	3	P048N			1.08	.12	1.05	
	5.18	29.1	-57.62	-14.3			1.6			.039	.038	1.07	
N0735	1 53.7	33 56	138.01	333.4	.S...3..	3	P048N			1.30	.29	1.23	
	5.89	29.0	-26.78	-3.4			1.9			.039	.038	1.27	
N0741	1 53.74	5 23.1	150.94	306.2	.E.0...-	-5*	W100V	E1 K		1.51	.01	1.51	1.15
	5.26	29.1	-53.68	-13.1	E 1		3.8			.069	.062	1.55	.04
N0736	1 53.78	32 48.1	138.39	332.4	.PLA...-	-3	P048C	E3 K	3	1.30	.03	1.30	0.85
	5.86	29.0	-27.86	-3.8			2.1			.050	.054	1.35	.03
N0748	1 53.9	-4 43	160.17	296.2						1.46	.28	1.39	
	5.07	29.1	-62.55	-16.0						.075	.100		
N0742	1 53.9	5 23	151.01	306.3	.CE.0...-	-6*	P200C			.39	.00	.39	
	5.26	29.1	-53.66	-13.2			1.9			.071	.071	.43	
N0755	1 53.91	-9 18.5	166.33	291.6	.SB.35.	3	P048C			1.60	.43	1.50	
	4.98	29.1	-66.30	-17.1			2.3			.050	.040	1.52	
N0740	1 54.01	32 46.3	138.45	332.4	.SB.35.	3	P048C			1.22	.56	1.09	
	5.86	29.0	-27.88	-3.9			1.5			.037	.034	1.12	
N0750	1 54.63	32 58.0	138.53	332.6	.E...P.	-5	P200V	D G	3	1.20	.09	1.18	.75
	5.87	29.0	-27.65	-3.9	E		3.7			.316	.141	1.23	.06
N0750.	1 54.63	32 57.8	138.53	332.6	.E...P.	-5	P200C	DE K	4	1.46	.16	1.42	1.08
	5.87	29.0	-27.66	-3.9			3.9			.042	.045	1.47	.05
N0751	1 54.64	32 57.6	138.53	332.6	.E...P.	-5	P200V	n GK	3	1.13	.00	1.13	.7
	5.87	29.0	-27.66	-4.0			3.7		4	.316	.158	1.18	.1
N0753	1 54.76	35 40.3	137.71	335.1	.SXT4..	4	W060V	S F	2	1.46	.13	1.43	1.00
	5.94	29.0	-25.05	-3.0	S 5	3*	3.2		4VS	.033	.025	1.46	.05
N0759	1 54.88	36 5.9	137.60	335.5	.E.0...-	-5	P048C			1.32	.00	1.32	
	5.96	29.0	-24.63	-2.8			2.2			.071	.071	1.38	
N0761	1 54.92	33 8.1	138.54	332.8	.SB.25.	2	P048C			1.21	.42	1.11	
	5.87	29.0	-27.47	-3.9			1.6			.037	.036	1.15	
A0154-27	1 54.97	27 37.3	140.41	327.6									
MC364	5.73	29.0	-32.75	-6.0									
A0155-02	1 55.6	2 50	153.59	303.9	.SB.9P.	9	P200C			1.35	.35	1.26	
MC582	5.21	28.9	-55.77	-14.3			3.5			.071	.071	1.27	
N0782	1 56.1	-58 1	286.62	240.0	.SBR3..	3	S030V		3	1.32	.03	1.31	
	3.42	29.0	-57.20	-21.6			2.4		3 S	.141	.095	1.34	
N0770	1 56.48	18 42.8	144.39	319.3	.E.3...-	-5*	P200C			1.13	.13	1.10	
	5.53	28.9	-41.08	-9.4			3.2			.048	.046	1.14	
A0156-08	1 56.5	-8 25	166.22	292.7	.SBR5P.	5	P048C			1.17	.03	1.16	
	5.00	28.9	-65.20	-17.5			1.9			.061	.058	1.18	
N0772	1 56.59	18 46.0	144.40	319.4	.SAS3..	3	W060V	S P F	3	1.85	.20	1.80	
	5.53	28.9	-41.02	-9.4	S 3 NT	1	3.9		04 S	.029	.021	1.83	
N0779	1 57.20	-8 12.3	163.50	294.9	.SAR3..	3	W060V	S G		1.61	.47	1.50	.98
	5.04	28.8	-63.32	-17.1	S 2	4	3.1			.040	.029	1.52	.03

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _L N _H N ₂ (24)	α _L α ₂ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N0681	12.9	12.695	12.9	.23	0.86	0.27	0.90	0.38	.76						1708	1736
N0679	12.68	.06	14.3	12.29	.03	.04	.02	.03	.19						0 3 26	28
52114		13.25	13.2	.36	0.90	0.55	0.96	0.62								
N0680		.09	14.9	.27	.05	.06	.05	.06								187
A0147-13				.23												148
A0147-27		*		.21	*	*									12965	18
															0 1 40	12923
I1731				.30												-42
N0684				.30												164
N0693				.23												165
N0691				.27												93
N0694				.27												147
52122															2870	3017
I0167				.27											0 2 43	147
N0695				.28												147
52123				.27												149
N0697																
N0701	12.7	12.90	12.6	.23	0.66	-.02	0.71	0.05								148
I1738	12.76	.09	14.0	.23	.04	.04	.04	.04								30
																29
N0702				.23												
A0149+17				.26												52
N0706				.24												134
A0149+36				.38											4881	4973
ZCG				.37											0 1 54	92
N0703										1.23*	.605					187
										1 1 1	.425				4800	4986
N0708				.37											0 1 120	186
I1743				.25											4837	5023
															0 1 120	186
N0720	11.7	11.15	12.1	.23	0.93	0.51	0.98	0.55	.86						4531	4646
	11.18	.13	13.8	10.89	.05	.05	.02	.03	.47						0 1 53	115
N0718	12.7	12.50	.24	.24	0.82	*	*	.03	.74						1808	1820
I1746	12.41	.08	14.5	12.20	.04										0 1 100	12
				.24											1672	1755
															0 1 55	83
															7717	7801
															0 1 30	84
N0721		14.1		.41	.66											
		.15	14.9	.38	.06											193
A0151+36		14.0		.23	.06	-.14			.44						5441	5628
N0731		.15	13.2	13.50	.06	.07			-.18						0 2 50	187
A0152+06				.24												29
I0173				.24											5160	5250
															0 1 12	90
															13911	13980
															0 2 28	69
N0735				.36												
52146																179
N0741	13.0	12.30	13.5	.24	1.03	*	1.04	0.65	.92	1.97*	.60		-.305	5559	5645	
3238A+V175	12.21	.06	14.8	11.98	.02	.02	.03	.03		7 516	.88			0 1 50	86	
N0736		13.20	12.9	.35	0.97	0.53	1.00	0.57	.85					4366	4542	
62111		.07	14.5	12.78	.03	.06	.02	.03	.47					0 1 40	176	
N0748				.23												
N0742				.24												46
3238B+V175										*				5417	5503	
														0 1 105	86	
N0755				.23												28
N0740				.35												175
N0750	12.9	13.2	12.4	.35	1.02	*	1.03	0.60	.89							175
62123+V189	12.93	.13	14.0	12.77	.05		.03	.04						5130	5305	PT
N0750		12.45	13.3	.35	1.00		1.01	.03						0 1 40	175	
		.08	14.3	.04			.03									175
N0751		13.5	12.5	.35	0.98	*	1.00	0.55	.85					5126	5301	PT
62123+V189		.13	14.1	13.07	.05		.03	.05						0 1 60	175	
N0753	13.0	13.00	13.5	.37	0.65		0.75	.51						4838*	5020	ST
N0759	12.65	.08	14.8	12.49	.03		.03				.87	1.01	1.90	1 1 25	182	
				.38												183
N0761				.35												176
A0154+27				.31												8201
52155				.24											8041	160
A0155+02															0 1 220	6075
V122															0 1 200	75
N0782	12.7			.27												
N0770	12.67	*	14.0	.27	*											-155
A0156-08				.24											2439	2570
															0 1 86	131
															4776	4805
N0772	12.0	11.10	.27	.27	0.77	*		.66							1 1 16	29
	11.17	.09	14.7	10.65	.04						1.63				2431	2562
N0779	11.8	11.86	12.2	.24	0.82	0.20	0.87	0.30	.67		2 .01	1.84		2 2 11	131	PT
	11.83	.07	13.6	11.23	.03	.04	.03	.04	.07					1428	1466	
														0 1 54	38	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log D ₀ (12)	Log A _e m.e. (13)
	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
N0777	1 57.35	31 11.2	139.74	331.1	.E.1...	-5	W060V	E K		1.47	.08	1.45	
	5.83	28.8	-29.19	-5.1	E 2		3.2			.066	.057	1.50	
N0783	1 58.2	31 38	139.79	331.6	.S..5..	5	P048N			1.25	.04	1.24	
	5.85	28.7	-28.71	-5.1			2.0			.039	.038	1.27	
A0158+08	1 58.3	8 4	150.79	309.2	.S.....		P048N			1.08	.26	1.02	
	5.32	28.7	-50.77	-13.4			1.5			.039	.038	1.04	
N0784	1 58.42	28 35.8	140.91	328.8	.SB.7/	7	P048C			1.79	.57	1.65	
	5.77	28.7	-31.58	-6.3			2.6			.037	.030	1.67	
N0788	1 58.61	-7 3.3	165.26	294.2	.SA50*	0*	W060V		3	1.26	.08	1.24	
	5.02	28.7	-63.80	-17.7	S 0		2.8		3	.051	.042	1.27	
A0200+21	2 0.55	21 48.0	144.18	322.6	.IB.9..	10	P048N			1.36	.02	1.35	
D 17	5.61	28.6	-37.85	-9.2	I *	9	2.3			.039	.038	1.36	
A0200+18	2 0.6	18 24	145.75	319.4	.SX55..	5	P048N			1.10	.00	1.10	
	5.54	28.6	-41.02	-10.5			1.8			.050	.050	1.12	
A0200+02	2 0.9	2 19	156.09	303.8									
Mk585	5.20	28.5	-55.61	-15.7									
N0803	2 1.03	15 47.5	147.18	316.9	.SA55*/	5	P048C			1.52	.34	1.44	
	5.48	28.5	-43.41	-11.5			2.3			.038	.031	1.46	
A0201+28	2 1.43	28 25.1	141.72	328.9									
Mk365	5.78	28.5	-31.54	-7.0									
N0808	2 1.64	-23 33.2	203.85	277.1	.SXT45.	4	P048C			1.20	.30	1.13	
	4.66	28.5	-73.18	-21.7			1.7			.059	.053	1.15	
I0198	2 3.4	9 3	151.92	310.6	.S.....		P048N			1.13	.23	1.07	
	4.34	28.4	-49.34	-14.3			1.6			.039	.038	1.09	
N0812	2 3.7	44 20	136.81	343.8	.S...P.		P048N			1.51	.34	1.43	
	6.30	28.3	-16.26	-1.2			2.3			.039	.038	1.48	
N0821	2 5.68	10 45.5	151.56	312.5	.E.6.5.	-55	W060V			1.54	.19	1.50	
	5.38	28.2	-47.56	-14.2	E 2		3.3			.066	.056	1.54	
N0818	2 5.71	38 32.4	139.06	338.6	.SA.5*.	5	P048C	E6 *K		1.51	.32	1.43	1.15
	6.10	28.1	-21.66	-3.9			2.3			.036	.033	1.47	
N0829	2 6.22	-8 1.6	169.93	293.7	.S..3P*	3*	P048C			1.14	.21	1.09	
	4.99	28.2	-63.37	-19.8			1.6			.054	.046	1.11	
A0206+35	2 6.65	35 33.7	140.28	335.9	.E.1.5P	-55	P048N			1.42	.06	1.40	
	6.01	28.1	-24.43	-5.3			2.4			.071	.071	1.46	
N0833	2 6.89	-10 22.2	173.86	291.3	PS..1P*	1*	P200C			1.27	.28	1.20	
	4.94	28.1	-64.99	-20.5			3.4			.058	.053	1.23	
N0835	2 6.95	-10 22.3	173.88	291.3	.SXR2*P	2	P200C			1.16	.07	1.14	
	4.94	28.1	-64.98	-20.5			3.4			.059	.054	1.17	
N0828	2 7.12	38 57.4	139.20	339.1	.S..1P*	1*	P048C			1.50	.10	1.48	
	6.13	28.0	-21.18	-4.0			2.5			.039	.038	1.53	
N0838	2 7.18	-10 23.0	174.00	291.3	.I.0.*P	0*	P200C			1.23	.00	1.23	*
	4.94	28.1	-64.94	-20.5			3.6			.073	.085	1.26	
N0839	2 7.26	-10 25.2	174.09	291.2	.L..*P/	-2*	P200C			1.26	.33	1.18	*
	4.94	28.1	-64.96	-20.6			3.3			.073	.079	1.21	
N0842	2 7.37	-7 59.4	170.35	293.8	.LA..*	-2	P048C			1.29	.25	1.23	
	4.99	28.1	-63.16	-20.0			1.9			.224	.129	1.26	
N0840	2 7.6	7 36	154.36	309.5	.SBR3..	3	P048N			1.40	.22	1.35	
	5.32	28.0	-50.17	-15.7			2.2			.039	.038	1.38	
I1783	2 7.8	-33 13	236.72	266.9	.S..15.	15	P048C						
	4.38	28.1	-72.06	-24.0									
N0848	2 7.84	-10 33.4	174.56	291.1	.SB.25.	2	P048C			1.28	.16	1.24	
	4.94	28.0	-64.95	-20.7			2.0			.061	.058	1.27	
A0208+05	2 8.0	5 38	155.99	307.6	.S.....		P048N			.98	.13	.94	
Mk587	5.28	28.0	-51.85	-16.4			1.4			.039	.038	.96	
A0208+06	2 8.12	6 32.1	155.33	308.5	.S..9*.	9*	P048N			1.36	.00	1.36	
D 18	5.30	28.0	-51.04	-16.2	I	2	2.9			.046	.045	1.37	
N0841	2 8.16	37 16.3	140.02	337.6	PSX.2..	2	P048N			1.31	.23	1.26	
	6.08	27.9	-22.71	-4.9			2.0			.039	.038	1.30	
I0211	2 8.5	3 38	157.81	305.7	.SXS5..	5	P048N			1.40	.06	1.38	
	5.23	28.0	-53.52	-17.1			2.3			.039	.038	1.40	
N0851	2 8.6	3 33	157.91	305.6	.L.....	-2	P048N			1.18	.19	1.14	
Mk588	5.23	28.0	-53.52	-17.2			1.7			.042	.045	1.17	
A0208+13	2 8.84	13 40.9	150.76	315.6									
Mk366	5.45	27.9	-44.58	-14.0									
A0209+37	2 9.88	37 34.9	140.23	338.1									
	6.10	27.8	-22.31	-5.0									
N0858	2 10.2	-22 41	203.11	278.4	.SXT5*.	5	P048C			1.20	.06	1.18	
	4.65	27.9	-71.04	-23.5			1.9			.061	.058	1.20	
A0211+03	2 11.1	3 53	158.52	306.1						.90	.07	.88	
Mk589	5.24	27.8	-52.98	-17.7						.051	.058		
A0212-07	2 12.0	-7 34	171.60	294.5						1.46	.71	1.29	
	5.00	27.7	-62.08	-21.0						.075	.100		
N0863	2 12.0	-1 0	163.51	301.3	.SA.1..	1	P048N			1.16	.03	1.16	
Mk590	5.14	27.7	-56.94	-19.3			1.9			.039	.038	1.19	
N0864	2 12.84	5 46.2	157.56	308.1	.SXT5..	5	P200V			1.66	.11	1.63	
	5.28	27.6	-51.13	-17.5	S 5	3	4.6			.031	.024	1.65	
I1784	2 13.27	32 25.2	142.90	333.6	.SAT4P*	4	P048C	S AF	4VS	1.21	.23	1.15	1.35
	5.95	27.6	-26.91	-7.8			1.8			.052	.039	1.18	
I1788	2 13.65	-31 25.9	230.45	268.9	.SBS35.	3	P048C			1.39	.33	1.31	0.85
	4.40	27.6	-71.16	-25.1	S 0 *		2.0			.061	.058	1.33	.04
N0871	2 14.46	14 19.0	152.08	316.7	.SBS5*.	5*	W100V			1.12	.38	1.03	
	5.48	27.5	-43.42	-15.0			2.7			.036	.032	1.05	
N0876	2 15.17	14 17.4	152.31	316.7	.SA.5*/	5	L036V			1.32	.59	1.18	
	5.48	27.4	-43.37	-15.2			2.0			.044	.041	1.20	
N0877	2 15.27	14 18.9	152.33	316.7	.SXT4..	4	W100V	SI *AF	25	1.37	.11	1.34	1.00
	5.48	27.4	-43.33	-15.2	S 5	1*	3.4	SI AF	3VS	.032	.027	1.37	.05
N0881	2 16.2	-6 49	172.15	295.6						1.46	.22	1.41	
	5.01	27.4	-60.82	-21.9						.075	.100		
A0217-00	2 17.2	-0 29	164.86	302.2	.SXS3..	3	P048N			1.24	.00	1.24	
Mk592	5.15	27.3	-55.76	-20.4			2.1			.050	.050	1.27	
A0217+06	2 17.9	6 35	158.60	309.4	.SBS7*/	7	P648C			1.41	.70	1.24	
	5.31	27.2	-49.79	-18.4			2.0			.039	.038	1.26	
A0218+39A	2 18.40	39 8.8	141.33	340.2	.SAS3P.	3	W060V			1.36	.16	1.32	
	6.21	27.1	-20.26	-5.9			2.9			.036	.033	1.37	
A0218+39B	2 18.48	39 7.9	141.35	340.2	.SBS1P.	1	W060V			1.21	.50	1.09	
	6.21	27.1	-20.27	-5.9			2.3			.037	.035	1.14	
N0890	2 19.03	33 2.3	143.91	334.7	.LXR-5.	-3	W100V	D P K *	3	1.46	.19	1.41	*
	6.00	27.1	-25.89	-8.6	E 4		3.5		3VS	.056	.039	1.46	
N0895	2 19.10	-5 45.0	171.78	296.9	.SAS6..	6	W060V			1.56	.12	1.53	1.20
	5.03	27.1	-59.55	-22.3	S 4	3	3.4	S F	3VS	.045	.030	1.55	.04

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _e (U-B) _T (23)	Log S _R N _e N _H N ₂ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N0777	13.0			.34												
N0783	12.37		14.5	.34												169
A0158+08				.25												169
N0784		12.26		.32	.50										4726	4818
N0788	13.1	.11	14.6	.24	.07										0 1 36	92
	13.12	13.0		.24	.73				.62						4137	161
		.15	13.9	12.64	.06										0 1 65	4170
A0200+21				.29									1.20			33
A0200+18				.27								1 .01			2636	2774
A0200+02				.24											1 0 15	138
N0803		13.01		.27	.65										2372	2499
A0201+28		.11	14.6	.32	.07										1 1 9	127
															6325	6393
N0808				.22											0 1 100	68
I0198				.25												118
N0812				.54											4773	4931
N0821	12.7	11.8	13.0	.26	0.96		0.97		.88						0 1 220	158
N0818	12.05	.2	14.0	11.51	.03		.03								9384	9476
				.43											0 1 74	92
N0829				.24												197
A0206+35		*		.39	*	*									1778	1874
52191															0 1 100	96
N0833		13.7		.24	.99	.51				2.33	.59					182
		.15	14.2	.24	.06	.07				3 3 2	.70				11075	11249
N0835		13.0		.24	.80	.17									0 2 33	174
N0828		.15	13.5	.44	.06	.07									*	13
62177										1.08*	.875				*	13
N0838		13.42		.24	0.63	-.08	*	*		1 1 0					5430	5612
N0839		.08	14.4	.24	.02	.03	*	*							0 1 120	182
N0842		13.85		.24	0.83	0.33	*	*							*	13
N0840		.09	14.2	.24	.04	.04									*	13
I1783	13.1	*		.20	*	*										22
N0848		13.7		.24	.57	.08									7113	7196
A0208+05		.15	14.5	.25	.06	.07									0 1 86	83
A0208+06				.26											*	-77
N0841				.41												12
52194				.25											4650	4725
I0211															0 1 200	75
N0851				.25											1612	1690
A0208+13				.27											1 0 10	78
32 42				.42	*	*										177
A0209+37		*		.22	*	*									3242	3309
N0858				.26	*	*									1 2 12	67
A0211+03				.26	*	*										3450
32 43															0 1 200	3516
A0212-07				.25											7743	66
N0863				.25											0 1 220	7847
N0864	12.3*	11.55	13.8	.26	0.58		0.64		.49						5310	104
I1784	11.42	.13	14.4	11.19	.05	.04									0 1 120	177
I1788		.11	14.4	.20	.07	.04									12356	12318
	13.2	13.10	12.8	.20	0.73	0.09	0.80	0.18							0 1 35	-38
	13.15	.09	14.1	.20	.04	.04	.04	.04							3488	3554
N0871				.28	.61	.06			.45						0 2 40	66
N0876		.15	13.6	13.50	.28										8250	20
N0877	12.4	12.50	13.0	.28	0.68	0.00	0.75	0.08	.57						0 1 200	8296
N0881	12.45	.08	13.9	12.11	.04	.05	.04	.05	-.08						0 1 68	46
A0217-00				.26												1564*
A0217+06				.46											1 1 13	71
A0218+39A				.46												161
52223+V323				.39	*	*	*	*								-74
A0218+39B				.28	.61	.06										3731
52223+V323				.28	.06										3731	3833
N0890	12.7	*	14.0	.26	0.54	-.05	0.60	0.00	.44						1 2 25	102
N0895	12.32		13.8	.26	.04	.04	.04	.04	-.12							101
	12.2	12.30	13.8	.26	.04	.04	.04	.04							4016	4117
	11.89	.09	14.6	11.93	.04	.04	.04	.04							0 1 68	101
															7500	19
															0 1 200	7544
																44
																70
																175
																175
																4201
																158
																2319
																21

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) IOOP (2)	Dec IOOP (3)	L B (4)	SGL (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₁₀ Log Do (13)	Log Ae m.e. (14)
N0891	2 19.41 6.33	42 7.2 27.0	140.39 -17.42	343.0 -4.8	.S4S38/ S 3	3	...V 5.0	S GK* S G *	1	2.13 .030	.68 .022	1.97 2.02	1.65 .03
N0899	2 19.6 4.66	-21 2 27.1	200.80 -68.42	280.5 -25.4	.18.9..	10	P048C 2.0			1.27 .039	.14 .038	1.24 1.25	
10223	2 19.7 4.67	-20 58 27.1	200.66 -68.38	280.6 -25.4	.S..9SP	9S	P048C 1.5			1.03 .039	.14 .038	1.00 1.01	
A0220+418	2 20.01 6.30	41 8.8 27.0	140.87 -18.28	342.1 -5.3	.RING.B	10P	P200V						
A0220+41A	2 20.06 6.30	41 8.6 27.0	140.88 -18.28	342.1 -5.3	.RING.A	-2P	P200V						
A0220+42	2 20.02 6.36	42 45.9 27.0	140.26 -16.77	343.6 -4.6	.E.0...	-5	P048N 2.6			1.52 .071	.00 .071	1.52 1.60	*
N0898	2 20.19 6.32	41 43.5 27.0	140.68 -17.73	342.7 -5.1	.S..3./	3	P048C 1.7			1.33 .037	.56 .035	1.19 1.22	
N0907	2 20.72 4.66	-20 56.4 27.0	200.83 -68.15	280.6 -25.7	.SB.75/ .S4S5..	7	P048C 1.7			1.29 .037	.44 .035	1.18 1.20	
N0908	2 20.77 4.65	-21 27.7 27.0	202.15 -68.32	280.1 -25.8	.S4S5..	5	W100V 4.0	S AF	3VS	1.74 .031	.30 .023	1.67 1.69	*
A0221+35 D 19	2 21.95 6.11	35 48.8 26.8	143.36 -23.10	337.5 -8.0	.S..9..	9	P048N 2.4			1.46 .046	.10 .045	1.44 1.46	
N0906	2 22.1 6.34	41 52 26.8	140.98 -17.47	343.0 -5.3	.SX52..	2	P048N 2.2			1.31 .039	.03 .038	1.30 1.36	
N0910	2 22.30 6.33	41 36.1 26.8	141.12 -17.70	342.7 -5.5	.LA.-..	-3	P048C 2.3			1.36 .071	.00 .071	1.36 1.43	
A0222+36	2 22.40 6.15	36 57.0 26.8	142.98 -22.01	338.6 -7.6									
N0922	2 22.82 4.55	-25 0.9 26.8	211.87 -68.85	276.2 -26.6	.SBS6P. S 5P	6	W100V 3.3		3	1.29 .036	.04 .033	1.28 1.30	0.85 .05
N0918	2 23.08 5.59	18 16.5 26.7	152.17 -38.95	321.3 -15.5	.SXT5..	5	P048C 2.4			1.53 .037	.20 .035	1.49 1.52	
N0926	2 23.56 5.15	-0 33.3 26.7	167.16 -54.86	302.6 -22.0	.SBT4*. .S..9*.	4	P048C 2.1			1.39 .048	.26 .044	1.33 1.35	
A0223-21 D 21	2 23.68 4.64	-21 38.9 26.7	203.24 -67.75	280.0 -26.4		9*	P048N 2.2			1.34 .046	.04 .045	1.33 1.34	
N0927	2 23.9 5.44	11 56 26.7	156.46 -44.43	315.2 -18.0	.SBR5..	5	P048C 1.9			1.16 .039	.00 .038	1.16 1.18	
A0223-10 D 20	2 23.92 4.92	-10 4.0 26.7	179.77 -61.73	292.6 -24.5	.SX.9..	9	P048F 2.1			1.48 .061	.39 .058	1.39 1.40	
A0224-24	2 24.2 4.56	-24 31 26.7	210.72 -68.44	276.8 -26.9	.SB.8..	8	P048N 2.2			1.43 .039	.22 .038	1.38 1.39	
N0925	2 24.28 6.04	33 21.4 26.6	144.89 -25.17	335.5 -9.5	.SX57.. SX5	7	P200V 5.0	R AF BS AF	2	1.99 .027	.21 .021	1.94 1.97	1.75 .1
A0224+22	2 24.5 5.72	22 52 26.6	149.98 -34.70	325.8 -14.0		4				.93 .075	.69 .100	.77	
N0936	2 25.08 5.13	-1 22.7 26.6	168.58 -55.26	301.9 -22.6	.LBT... S80	-1	P200V 4.8	B K B K	3 04	1.72 .036	.08 .022	1.70 1.73	1.12 1.00
N0941	2 25.92 5.13	-1 22.5 26.5	168.86 -55.13	301.9 -22.8	.SXT5.. S 5	5	W060V 3.1		3VS	1.45 .032	.12 .024	1.36 1.44	.04
N0945	2 26.18 4.90	-10 45.6 26.5	181.65 -61.75	292.0 -25.2	.SBT5.. SX4*	5	P048C 2.3			1.40 .049	.08 .039	1.38 1.40	
N0947	2 26.2 4.69	-19 17 26.5	198.20 -66.31	282.7 -26.7						1.42 .075	.25 .100	1.37	
N0948	2 26.32 4.90	-10 44.1 26.5	181.66 -61.71	292.0 -25.2	.SX55*. .SXT2..	5	P048C 1.8			1.15 .053	.07 .045	1.13 1.15	
A0226+31	2 26.4 5.98	31 15 26.4	146.29 -26.92	333.7 -10.8		2	P048N 1.8			1.16 .039	.10 .038	1.14 1.18	
N0942	2 26.72 4.90	-11 3.0 26.5	182.30 -61.83	291.7 -25.4	.L...*P	-1*	P200C						
N0943	2 26.74 4.90	-11 3.5 26.5	182.32 -61.83	291.7 -25.4	.I.0.5P	0S	P200C						
N0954	2 26.9 3.97	-41 38 26.5	254.80 -65.46	257.5 -27.8	.SA.75. .SAT3*5	7S	P048C 3S						
N0949	2 27.73 6.18	36 55.1 26.3	144.05 -21.62	339.0 -8.5	S *		W060V 3.0	DE K *		1.44 .039	.20 .032	1.39 1.43	.8 .07
A0228-10 D 23	2 28.00 4.90	-10 58.1 26.3	182.58 -61.53	291.9 -25.7	.I..9..	10	P048F 2.1			1.32 .061	.15 .058	1.29 1.30	
N0955	2 28.01 5.13	-1 19.8 26.3	169.51 -54.76	302.1 -23.3	.S..2*/ E B	2	P048C 2.0			1.48 .032	.51 .028	1.36 1.39	.8 .07
N0958	2 28.18 5.08	-3 9.8 26.3	171.69 -56.11	300.2 -23.8	.SB55*. SX4*	5	P048C 2.0	R *F		1.44 .044	.41 .033	1.34 1.36	*
A0228+39	2 28.5 6.27	39 10 26.2	143.25 -19.50	341.1 -7.6	.S..3..	3	P048N 1.9			1.41 .039	.54 .038	1.28 1.33	
A0228+01	2 28.8 5.18	1 7 26.3	167.16 -52.73	304.7 -22.7	.S..6*.	6*	P048N 1.8			1.25 .039	.26 .038	1.19 1.21	
N0959	2 29.3 6.13	35 17 26.2	145.08 -22.99	337.7 -9.5	.S..9*.	9*	P048N 2.1			1.35 .039	.19 .038	1.30 1.32	
A0229+38 D 22	2 29.80 6.25	38 27.5 26.1	143.80 -20.05	340.6 -8.2	.I..9..	10	P048F 2.1			1.38 .071	.24 .071	1.32 1.34	
10235 MK368	2 30.02 5.67	20 25.5 26.1	152.75 -36.29	324.0 -16.1	.P.....	9	P048N .9			.71 .050	.10 .050	.69 .73	
A0230+33 D 25	2 30.28 6.06	33 16.2 26.1	146.19 -24.74	335.9 -10.6	.I..9..	10	P048F 2.2			1.33 .046	.01 .045	1.32 1.34	
A0230+40 D 24	2 30.57 6.33	40 18.4 26.1	143.15 -18.30	342.3 -7.5	.I..9..	10	P048N 2.6			1.53 .100	.06 .100	1.52 1.55	
N0986A	2 30.7 4.03	-39 32 26.1	249.46 -65.69	259.8 -28.6	.SB.9S.	9*	P048C 1.3			1.23 .183	.42 .112	1.13 1.14	
N0976	2 31.17 5.68	20 45.5 26.0	152.85 -35.87	324.4 -16.2	.SAT5*. S 3 N	5*	W100V 3.2	S *F S K *	3 S	1.23 .035	.06 .031	1.21 1.24	0.73 .04
N0972	2 31.28 5.93	29 5.5 26.0	148.40 -28.43	332.2 -12.7	.I..0..	0	P200V 4.3	I A *	2 S	1.56 .026	.26 .024	1.50 1.54	1.00 .03
A0231+29 D 26	2 31.52 5.94	29 31.8 26.0	148.24 -28.01	332.6 -12.5	.I..9..	10	P048N 2.0			1.33 .039	.27 .038	1.27 1.29	
N0986	2 31.6 4.04	-39 15 26.1	248.66 -65.64	260.2 -28.8	.SBT2.. .RING..	9 2R	W100V 3.8	R G	5 4	1.57 .057	.12 .036	1.54 1.56	
N0985.	2 32.19 4.94	-9 0.3 26.0	180.85 -59.49	294.3 -26.2			P048V 1.8			1.12 .075	.00 .100	1.12 1.13	0.3 \$.08
A0232+37	2 32.5 6.23	37 25 25.9	144.77 -20.78	339.9 -9.1	.SX57..	7	P048N 2.1			1.38 .039	.19 .038	1.33 1.36	
A0232+59	2 32.6 7.54	59 26 25.8	135.84 -5.7	359.3 1.5	.L..-P*	-3*	P200C 2.7			.83 .071	.07 .071	.81	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N ₁ A ₂ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)			
N0891	12.2*	10.90	14.6	.52	0.92	0.27	1.05	0.35	.68	1.94	.74%				524	706	PT	
N0899	10.76	.08	14.7	9.83 .23	.03	.05	.02	.03	.05	1 3 3	1.05*		1.91		2 0 9	182		
I0223				.23											1785	1746		
A0220+41B				.50											0 1 86	-39		
52229															1585	1547		
A0220+41A		*		.50	*	*									0 1 86	-38	P	
52229																		
A0220+42		*		.54	*	*				2.99	.66				5279	179	P	
N0898				.52						9 4 2	.73*				0 2 36	5458		
N0907				.23											6358	6541		
N0908	11.1	10.85		.23	0.67	*	*	*	.55						0 2 51	183		
A0221+35	10.93	.09	13.6	10.37 .42	.04					1.54	.29%	1.19	2.37		1585	181	T	
										4 2 2	.81*	1 .02	3.20		0 1 86	-39		
N0906				.52								.68			1 1 28	-41		
N0910				.52								2 .01			580	744		
A0222+36				.44											2 0 9	164		
N0922	12.3	12.55	12.3	.22	0.34	-.37	0.39	-.32		1.45*	.15%				4586	4766		
N0918	12.42	.09	13.7	.30	.04	.04	.04	.04		1 1 1	.27%				0 1 50	180		
															5136	5315		
N0926				.26											0 1 120	179		
A0223-21				.23											9810	9977		
N0927				.28								.82			0 1 120	167		
A0223-10				.25								1 .01			1508	-57		
A0224-24				.22											1 1 9	1616		
															6472	6510		
N0925	12.6*	10.60	14.8	.40	0.59	*	0.61	*	.45						0 1 55	38		
A0224+22	11.24	.07	14.9	10.03 .32	.03		.03					2.20	1.04		1556	1512		
52242												4 .01			1 0 15	-44		
N0936	11.5	11.10	12.2	.26	0.96	0.55	0.99	0.58	.88						8258	8343		
N0941	10.92	.05	14.4	10.77	.03	.04	.02	.03	.49						1 1 19	85		
N0945	13.3	13.00	13.5	.27	0.53	-.10	0.57	-.15							2090	2090		
	12.87	.07	14.8	.25	.03	.03	.03	.03							1 0 100	0		
N0947				.24													-56	
N0948				.26											560	716	PT	
A0226+31				.38											4 2 16	156		
N0942				.25											9800	9923		
V217				.25											0 1 105	123	T	
N0943				.25											1317	1350		
V217															0 2 31	33	T	
N0954				.21													-4	
N0949	12.8	12.55	12.0	.45	0.66	-.07	0.70	0.03	-.52								-37	
A0228-10	12.64	.09	14.1	11.94 .26	.03	.04	.03	.04	-.17						5353	5233	S	
															0 1 30	-120		
N0955	13.1	12.95	12.4	.27	0.95	0.32	1.01	0.38							622	785		
N0958	13.01	.09	13.9	.27	.04	.04	.06	.05							0 1 100	163		
	13.0	12.95		.27	0.76	0.19	*	*	.59			1.16	1.32		5732	5756		
A0228+39	12.99	.09	14.0	12.32	.04	.04			.05			1 .02			1 1 25	24		
				.49														
A0228+01				.27													169	
N0959				.43											7360	7400		
A0229+38				.48						1.74	1.09*	.51%			0 1 21	40		
I0235	15.3	.15	13.4	.32	.61	.07			.43			.40			568	734		
			14.78	.41	.06	.07			.05			1 .01			1 0 10	166		
A0230+33				.41											8936	9046		
A0230+40				.52								.98			0 1 220	110		
N0986A				.20								1 .01			616	767		
N0976	12.7	13.21	12.4	.32	0.81	0.20	0.90	0.29				1 .01			1 0 10	151		
N0972	12.92	.08	14.1	.37	.03	.03	.03	.03				1.22			582	752		
	12.6	12.105	12.6	.37	0.85	0.20	0.89	0.27	.71			1 .01	2.51		1 0 10	170		
A0231+29	12.28	.05	14.1	11.53 .38	-.02	.02	.02	.03	.10						1532	110	PT	
															0 4 23	138		
N0986	11.8	11.8		.20	.78	-.01		.70		1.45*	1.11%		1.50%		1025	1164		
N0985.	11.60	.15	14.2	11.48	.06	.07		-.07		1 1 2	1.11%				2 0 9	139	P	
V285		14.10	11.1	.26	0.65	-.40	0.45	-.75	.51						2058	1943		
A0232+37		.07	14.5	13.83 .47	-.05	.05	.05	-.05	-.50						0 1 150	-115		
V 96															12950	12948		
A0232+59															0 1 50	-2		
															3690	3851	S	
															0 1 105	161		
															15	223		
															0 1 30	208		

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D25 m.e. (10)	Log R25 m.e. (11)	Log(DX) Log Do (12)	Log Ae m.e. (13)	
N0988	2 33.00 4.92	-9 34.5 25.9	181.96 -59.70	293.7 -26.6	.SBS6*	6	P048C 2.7			1.67 .046	.24 .045	1.61 1.63		
N0991	2 33.07 4.98	-7 22.2 25.9	178.75 -58.24	296.1 -26.1	.SXT5.. S	5 7*	W100V 3.6	S AF	3VS	1.43 .042	.031 .031	1.42 1.44		
A0233+23	2 33.3 5.77	23 41 25.8	151.71 -33.05	327.4 -15.4	.SX55..	5	P048N 1.8			1.28 .039	.31 .038	1.20 1.23		
I0239	2 33.34 6.28	38 45.1 25.8	144.34 -19.50	341.2 -8.7	.SXT6..	6	P200V 4.7		3VS	1.66 .037	.03 .027	1.66 1.70		
A0234+34	2 34.62 6.12	34 12.9 25.7	146.65 -23.50	337.2 -11.0	RSBS1*	1	P048C 1.8			1.17 .039	.15 .038	1.14 1.19		
A0234+20 MK369	2 34.63 5.70	20 55.4 25.7	153.62 -35.34	324.9 -16.9						.39 .050	.00 .050	.39		
A0235-02	2 35.4 5.11	-2 4 25.7	172.73 -54.09	301.9 -25.2	.SBS3..	3	P048N 1.9			1.31 .046	.28 .045	1.24 1.27		
A0235+29	2 35.5 5.96	29 32 25.6	149.12 -27.63	333.0 -13.3	.SX55..	5	P048N 1.7			1.07 .039	.00 .038	1.07 1.10		
N1016	2 35.7 5.21	1 55 25.6	168.52 -51.03	306.1 -24.1	.E.0...	-5	P048N 2.5			1.45 .071	.00 .071	1.45 1.49		
N1019	2 35.8 5.20	1 42 25.6	168.77 -51.18	305.9 -24.2	.SBS3..	3	P048N 1.7			1.09 .039	.04 .038	1.08 1.11		
N1022	2 36.07 4.99	-6 53.4 25.6	179.02 -57.37	296.8 -26.7	PSBS1.. S 3 N	1	P200V 4.1	S P G	4 S	1.40 .045	.08 .034	1.38 1.41	0.90 .04	
N1003	2 36.10 6.38	40 39.4 25.5	144.01 -17.55	343.1 -8.2	.SAS6..	6	P200V 4.5		2	1.73 .030	.40 .022	1.64 1.68		
A0236+18A	2 36.31 5.62	18 10.0 25.6	155.74 -37.54	322.5 -18.4	.IBS9P..	10	P200C 3.3			1.28 .039	.34 .038	1.19 1.21		
A0236+18B	2 36.36 5.62	18 9.0 25.6	155.77 -37.55	322.5 -18.4	.SB.0*/	0	P200C 2.6			1.04 .039	.59 .038	.90 .94		
N1024	2 36.5 5.43	10 38 25.6	161.08 -43.90	315.1 -21.4	PSAR2..	2	P200C 4.1			1.67 .039	.38 .038	1.58 1.61		
N1032	2 36.8 5.18	0 53 25.5	169.92 -51.65	305.2 -24.7	.S..1..	1	P048N 2.3			1.56 .039	.41 .038	1.47 1.50		
I1830	2 36.87 4.42	-27 39.5 25.6	219.94 -66.13	273.5 -30.0	.SB.05.	0	P048C 2.1			1.26 .046	.04 .045	1.25 1.28		
N1035	2 37.02 4.95	-8 20.8 25.5	181.37 -58.15	295.3 -27.2	.SAS55.. P	55	W100V 3.1	SI *F *		1.35 .043	.42 .032	1.25 1.27		
N1023	2 37.27 6.31	38 50.9 25.4	145.03 -19.09	341.6 -9.3	.LBT... E 7P	-3	P200V 4.9	D P K	3	1.94 .034	.42 .020	1.84 1.91	1.27 .04	
N1036 MK370	2 37.67 5.65	19 5.0 25.4	155.51 -36.58	323.5 -18.3	.P...S.		P048N 2.1		5	1.31 .051	.14 .058	1.28 1.32		
A0237+01 D 27	2 37.82 5.18	1 0.8 25.4	170.10 -51.38	305.4 -24.9	.I..9.. I	10 9	P048N 2.0			1.25 .039	.07 .038	1.24 1.25		
A0237+34	2 37.84 4.17	-34 44.4 25.5	237.30 -65.65	265.3 -30.3	.E.0.P.	-5	P048C 3.7			2.30 .049	.16 .049	2.27 2.30		
N1042	2 37.94 4.94	-8 38.8 25.4	182.08 -58.17	295.0 -27.5	.SXT6.. S 5 N	6	W100V 4.1	S F	4VS	1.67 .037	.08 .024	1.67 1.69		
N1047	2 38.08 4.95	-8 21.6 25.4	181.71 -57.96	295.3 -27.5	.S..0*/	0*	P048C 1.6		3 S	1.18 .051	.37 .041	1.09 1.12		
N1048A	2 38.14 4.94	-8 45.7 25.4	182.31 -58.20	294.9 -27.6	.SB.3*/	3	P048C 1.3			1.12 .054	.47 .046	1.01 1.04		
N1049B	2 38.18 4.94	-8 44.9 25.4	182.30 -58.19	294.9 -27.6	.SBS5..	5	W100V 2.5			1.01 .053	.28 .045	.94 .96		
A0238-59	2 38.14 7.61	59 23.4 25.3	136.51 -3.33	359.6 -.8	.SXT4..	4*	L120C							
A0238-15	2 38.4 4.77	-15 21 25.4	193.25 -61.92	287.6 -29.0	.SX.4..	4	P048C 1.9			1.21 .061	.06 .058	1.19 1.21		
N1044.	2 38.41 5.37	8 31.4 25.4	163.31 -45.37	313.2 -22.6	.L...P*	-3	PG48C 1.5			.79 .075	.00 .100	.79 .83		
N1046	2 38.5 5.37	8 30 25.4	163.35 -45.37	313.2 -22.6	.L...*	-3*	PG48C							
N1052	2 38.62 4.95	-8 28.1 25.4	182.03 -57.93	295.2 -27.7	.E.4... E 2	-5	W100V 3.6	E4 K E4 K		1.46 .075	.16 .033	1.42 1.46	1.00 .06	
N1055	2 39.19 5.16	0 13.7 25.3	171.34 -51.75	304.7 -25.5	.SB.3*/ S 3	3	P048C 2.9	S G		1.88 .033	.40 .025	1.78 1.81	1.44 .04	
N1063	2 39.67 5.01	-5 46.9 25.3	178.63 -55.96	298.3 -27.3	.S...6*	4*	P048C 1.6			1.20 .057	.35 .050	1.12 1.14		
N1068	2 40.12 5.15	-0 13.5 25.2	172.11 -51.93	304.3 -25.8	RSAT3.. S 3P	3	W100V 4.4	SD *G S P G	5 4	1.84 .032	.07 .022	1.82 1.85	1.23 .02	
N1058	2 40.38 6.26	37 7.8 25.1	146.41 -20.37	340.4 -10.6	.SAT5.. S 5 K	5 6*	P200V 4.4	S AF D F	4 S	1.48 .032	.02 .024	1.47 1.51		
N1067	2 40.8 6.08	32 18 25.1	148.85 -24.64	336.1 -13.0	.SX55..	5	P048N 1.8			1.10 .039	.02 .038	1.09 1.13		
N1072	2 40.95 5.16	0 5.7 25.1	172.01 -51.56	304.7 -25.9	.SXT35.	3	P048C 1.6			1.23 .038	.39 .037	1.14 1.17		
N1073	2 41.09 5.19	1 9.9 25.1	170.92 -50.73	305.8 -25.7	.SBT5.. SX5	5 3	P200V 4.8	B AF B F	2 3VS	1.69 .032	.03 .023	1.69 1.71	1.42 .04	
N1079	2 41.59 4.35	-29 12.9 25.1	223.89 -65.21	271.7 -31.1	RSXT0P. S N*	0	P200V 4.2		4 S	1.49 .043	.20 .031	1.44 1.47	0.93 .04	
N1080	2 42.7 5.03	-4 56 25.0	178.43 -54.83	299.4 -27.8	.SX.5..	4	P048C 1.8			1.15 .061	.08 .058	1.13 1.16		
A0243+15. MK597	2 43.3 5.57	15 38 24.9	159.25 -38.82	320.7 -21.0			W100V S 5	S A S P *A	2 3VS	1.46 .040	.27 .029	1.40 1.42	0.95 .04	
N1084	2 43.53 4.96	-7 47.1 24.9	182.48 -56.55	296.3 -28.7	.SASS.. S 5	5	P048N 2.4			1.24 .046	.10 .045	1.22 1.25		
N1085	2 43.8 5.25	3 24 24.9	169.46 -48.60	308.4 -25.6	.SA.3..	3	P048N 2.0			1.54 .031	.17 .023	1.50 1.52		
N1087	2 43.86 5.14	-0 42.5 24.9	173.75 -51.65	304.1 -26.9	.SXT5.. S 5 K	5 5*	W100V 3.7	SI *A TS A	4	1.58 .033	.33 .023	1.50 1.53	1.12 .04	
N1090	2 44.01 5.15	-0 27.4 24.9	173.52 -51.44	304.3 -26.8	.SBT4.. S 6 N	4 7*	W100V 3.6	S F S F	3					
N1097A	2 44.04 4.30	-30 26.3 24.9	226.82 -64.71	270.3 -31.6	.E.5...	-5	W100V							
N1097	2 44.19 4.29	-30 29.1 24.9	226.92 -64.68	270.2 -31.6	.SBS3.. SX3	3 2	W100V 4.6	R P G	2S 5 S	1.97 .029	.15 .020	1.93 1.95	1.45 .03	
A0244-22	2 44.6 4.54	-22 52 24.8	209.64 -63.51	279.2 -31.4						1.25 .075	.39 .100	1.16 1.40		
A0244+37	2 44.8 6.29	37 20 24.7	147.15 -19.79	341.0 -11.3	.SBS8..	8	P048N 2.3			1.43 .039	.13 .038	1.40 1.43		
N1094	2 44.91 5.15	-0 29.5 24.8	173.82 -51.31	304.4 -27.1	.SX52..	2	W100V 3.0			1.16 .035	.09 .032	1.14 1.17		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N _H N ₊ (24)	α ₊ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	V _O ΔV (29)	
N0988				.26												
N0991	12.7			.27												-5
A0233+23	12.42		14.3	.34											1577	1580
10239		11.93		.49	.71				.59						5641	5760
A0234+34		.11	15.0	11.41	.07							1.67			1 1 9	119
		14.2		.43	.72				.55			1.01	.98		900	1064
		.15	14.5	13.59	.06										1 0 10	164
A0234+20				.33											4800	4951
22 4															0 1 150	151
A0235-02		14.2		.27	.74	.52									3779	3887
A0235+29		.15	14.9	.39	.06	.07				1 0 0					0 2 70	108
N1016				.28											5072	5208
N1019				.28											1 1 12	136
N1022	12.0	12.20	12.2	.27	0.76	0.23	0.75	0.22	.67						7221	7257
	12.08	.08	13.8	11.85	.02	.03	.03	.03	.17						0 1 43	36
N1003		12.1		.54	0.56		*		.36						1503	1505
A0236+18A		.2	14.6	11.24	.04							1.84			0 1 23	2
V143				.32								1.02	.705		622	790
A0236+18B				.32											1 1 10	168
V143				.32											4037	4134
N1024				.30											0 1 79	97
N1032				.28												97
																70
I1830		13.2		.21	.41	-.26		.34								
N1035		.15	14.2	12.94	.06	.07		-.29				.53			1423	1346
	12.8			.27								1.01	2.30		1 2 22	-77
N1023	13.07		13.6												1322	1319
	11.2	10.20	12.0	.51	1.00	0.55	1.04	0.59	.86						0 1 27	-3
N1036	10.39	.09	13.7	9.60	.03	.06	.03	.04	.42			1.10			614*	776
				.33								2.04	4.14		2 2 33	162
A0237+01				.28								.73			789*	888
												1.01			1 3 12	99
A0237-34	9.5*	9.045		.20								.24			1187	1219
	9.14	.14	15.1	8.84								1.01			1 0 70	32
N1042	12.5	11.5		.27	0.55		*		.46						53	-51
N1047	11.85	.13	14.5	11.16	.05							1.31			0 2 9	-104
				.27								1.01	2.13		1365	1360
N1048A				.27											1 0 10	-5
N1048B				.27												
A0238+59																
A0238-15				.25								1.975				-6
												4.01			2	208
N1044.		14.4		.30	1.17	0.57	*	*	1.04	2.10	.62				4 1 5	206
N1046		.1	13.2	14.00	.04	.06		.52		4 2 4	.80		-2.64		7745*	7713
		*		.30											1 1 29	-32
															6520	6580
															0 1 125	60
N1052	11.6	11.50	12.0	.27	0.96	0.49	1.02	0.55	.89	1.66	.84				1439	1434
	11.52	.07	13.4	11.21	.03	.04	.03	.03	.44	5 515	-.37				0 4 22	-5
N1055	12.0	11.40	14.1	.28	0.85	0.20	0.92	0.28	.71	1.365	.765	1.53	2.415		1050	1077
N1063	11.30	.08	14.6	10.79	.05	.05	.03	.03	.07	1 0 3	.765	1.02	1.93		1 0 95	27
N1068	10.0	9.51	11.1	.28	0.70	0.08	0.75	0.08	.62	2.69	.54	1.47	.70		1109	1134
N1058	9.74	.04	13.4	9.17	.02	.02	.02	.01	.02	31 916	.75	2.01	3.72		2 7 10	25
	12.7	12.15		.49	0.61	0.09	*		.49			1.70			519	674
	12.30	.08	14.3	11.64	.03							1.01	.68		1 2 10	155
N1067				.43												
N1072				.28											4535	4676
															0 1 25	141
N1073	12.0	11.55	14.1	.29	0.53	-.05	0.58	0.00	.45	1.41	.275					
	11.34	.08	14.8	11.23	.03	.05	.03	.04	-.11	1 2 4	.74*	1.83			1216	1245
N1079	12.6	12.30	12.4	.21	0.93	0.40	0.95	0.43	.83	1.76	.515				1 1 11	29
	12.39	.09	14.1	11.92	.03	.05	.03	.04	.33	1 1 1	.515	.29			2252	2165
N1080				.28											0 1 250	-87
															7843	7847
A0243+15.				.32											1 1 12	4
N1084	11.2	11.225	11.5	.27	0.62		0.70		.50	1.58	.46*	1.45	1.92		7650	7732
	11.60	.06	12.7	10.73	.04		.05			2 4 6	1.04	1.01	2.21		0 1 200	82
N1085				.29											1413	1406
															1 2 12	-7
N1087	11.2	11.55		.29	0.56	-.09	*	*	.45	1.155	.655				6950	6986
	11.32	.07	13.7	11.17	.03	.05			-.17	1 0 1	.655	2.635			0 1 72	36
N1090	12.8	12.60	13.7	.29	0.67	0.09	0.77	0.19	.04						1824	1844
	12.45	.08	14.5		.04	.05	.04	.04							0 1 200	20
N1097A		13.7		.21	0.85	0.43	*	*								
		.1			.1	.06										
N1097	10.6	10.25	13.0	.21	1.00	*	0.96	0.25	.92	1.73	.47	*	2.36		1320	-93
	9.93	.09	14.6	9.91	.05		.04	.05		3 4 4	.91				0 3 34	-93
A0244-22				.23												
A0244+37				.51												
N1094				.29												
															6264	153
															0 1 58	6284

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA IOOP (2)	Dec IOOP (3)	B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log R ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D) Log Do (13)	Log Ae m.e. (14)
A0245+02 MK599	2 45.1 5.23	2 57 24.7	170.28 -48.73	308.0 -26.0						.75 .075	.14 .100	.72 1.16	
A0245+26	2 45.1 5.91	26 54 24.7	152.64 -28.95	331.6 -16.4	.S...4..	4	P048N			1.31 .039	.64 .038	1.20 1.75	
A0245+03 D 28	2 45.33 5.25	3 40.5 24.7	169.64 -48.14	308.8 -25.9	.S...9*.	9*	P048N			1.75 .050	.00 .050	1.77 1.11	
N1104	2 46.09 5.15	-0 28.7 24.7	174.14 -51.10	304.5 -27.3	PSBS0..	0	P048C			1.13 .038	.11 .036	1.14 1.14	
A0246-00	2 46.3 5.14	-0 44 24.6	174.49 -51.25	304.2 -27.5									
I1856	2 46.30 5.13	-0 58.5 24.6	174.76 -51.42	304.0 -27.5	.SB.3*.	3	P048C			1.12 .039	.25 .038	1.06 1.09	
A0246+18	2 46.4 5.65	18 7 24.6	158.33 -36.33	323.5 -20.6						.051	.00 .058	.88 1.00	
I1854	2 46.51 5.68	19 5.9 24.6	157.71 -35.49	324.4 -20.2									
A0246+01 D 29	2 46.55 5.21	1 55.1 24.6	171.73 -49.26	307.1 -26.7	.S...9..	9	P048N			1.75 .050	.00 .050	1.75 1.77	
A0247-00	2 47.2 5.14	-0 44 24.5	174.74 -51.09	304.3 -27.7	.SBS45.	45	P048C			1.12 .075	.17 .100	1.08 1.11	
A0248+04 MK600	2 48.5 5.27	4 15 24.4	169.98 -47.19	309.7 -26.4						.70 .075	.25 .100	.64 1.61	
A0249-01 D 30	2 49.35 5.12	-1 22.8 24.3	176.08 -51.17	303.8 -28.4	.SB.9..	9	P048N			1.63 .100	.10 .100	1.61 1.63	
N1136	2 49.4 3.00	-55 16 24.4	273.40 -54.67	241.5 -29.3	SX .SBR15.	9 1	P048N P060V		4VS	1.22 .129	.06 .079	1.21 1.24	
I0267	2 51.1 5.50	12 38 24.1	163.47 -40.21	318.6 -23.9	PSBS3..	3	P048N			1.35 .039	.11 .038	1.33 1.36	
N1140	2 52.14 4.88	-10 13.9 24.1	188.34 -56.34	294.1 -31.3	.I...9..	10	P060V			1.16 .051	.23 .041	1.11 1.12	
N1143	2 52.60 5.15	-0 22.8 24.0	175.86 -49.89	305.2 -28.9	.RING.A	-2P	P200V			1.04 .041	.01 .042	1.04 1.08	0.60 .05
N1144	2 52.64 5.15	-0 23.2 24.0	175.88 -49.89	305.1 -28.9	.RING.B	10P	P200V			.93 .038	.15 .035	.89 .90	0.5 .1
A0253-27	2 53.5 4.36	-27 37 24.0	220.78 -62.47	273.7 -33.6	.SAR5*.	5	P048C			1.27 .061	.00 .058	1.27 1.29	
A0254-02 MK601	2 54.1 5.08	-2 59 23.9	179.24 -51.42	302.4 -30.0									
A0255+05.	2 55.05 5.32	5 49.6 23.8	170.27 -44.93	312.0 -27.4	.E.0*.	-5	P048C			.93 .075	.30 .100	.86 .91	*
A0255-54	2 55.1 2.98	-54 48 23.9	271.89 -54.32	241.8 -30.2	.SBS7*.	7*	S030V			1.84 .105	.60 .066	1.70 1.72	
A0255+41	2 55.8 6.52	41 5 23.6	147.27 -15.48	345.4 -11.2	.L...*.	-2*	P200C		1				
N1165	2 56.6 4.17	-32 19 23.7	230.93 -62.01	268.0 -34.3						1.49 .075	.31 .100	1.42 1.46	
N1156	2 56.78 5.89	25 2.4 23.5	156.32 -29.19	331.2 -19.6	.IBS9..	10	P200V	I A		1.49 .026	.12 .019	1.46 1.48	1.03 .04
I0277 MK602	2 57.2 5.23	2 34 23.5	174.00 -46.98	308.8 -29.0	.SBT4P*	4*	P048N			1.19 .046	.08 .045	1.17 1.20	
N1161	2 57.9 6.72	44 43 23.4	145.81 -12.12	348.7 -9.5	.L.....	-2	P048N			1.49 .071	.14 .071	1.46 1.56	
N1160	2 57.9 6.73	44 46 23.4	145.79 -12.07	348.8 -9.5	.S...6*.	6*	P048N			1.20 .039	.29 .038	1.14 1.20	
N1163	2 58.0 4.67	-17 21 23.5	201.17 -58.64	286.1 -33.9						1.53 .075	.85 .100	1.33 1.37	
N1167	2 58.59 6.27	35 0.2 23.3	150.95 -20.49	340.4 -14.9	.LA...*	-3	P048N			1.49 .051	.10 .058	1.47 1.54	
N1172	2 59.25 4.73	-15 2.0 23.4	197.49 -57.35	288.9 -33.9	.E.1*. E 1	-5*	P048C			1.35 .316	.04 .141	1.34 1.38	1.00 .06
N1169	3 0.19 6.82	46 11.4 23.1	145.44 -10.63	350.2 -9.1	.SAR3..	3	P060V	S FG	3VS	1.64 .034	.16 .029	1.60 1.69	1.1 .1
N1179	3 0.35 4.61	-19 5.6 23.2	204.68 -58.81	284.1 -34.7	SX2 .SXR6..	3* 6	W100V			1.66 .040	.027 .033	1.69 1.66	
N1187	3 0.40 4.48	-23 3.8 23.2	212.10 -60.06	279.2 -35.0	S P .SBR5..	5	P048N	S AF	3VS	1.70 .029	.09 .022	1.68 1.70	
A0300+16	3 0.45 3.126	16 14.7 42 8.8	163.07 -35.96	323.2 -24.4	.E.1*. S NN *	-5S -1	P048C						0.2 .07
N1175	3 1.26 6.61	42 8.8 23.0	147.65 -14.05	346.9 -11.5	.LAR... S NN *	-1	P060V	D *K	3	1.39 .040	.48 .038	1.27 1.36	
N1199	3 1.31 4.71	-15 48.6 23.1	199.19 -57.26	288.1 -34.5	.E.3*. E 2	-5*	P060V			1.35 .158	.07 .085	1.33 1.37	0.87 .05
A0301-25 D227	3 1.65 4.40	-25 28.1 23.1	216.94 -60.33	276.3 -35.4	.S...9*. S	9	P048N	E3 K		1.32 .052	.14 .050	1.28 1.29	
N1201	3 1.96 4.37	-26 15.9 23.1	218.55 -60.41	275.3 -35.5	.LAR0*. S 0	-2	P200V		04	1.64 .075	.20 .037	1.59 1.62	1.05 .03
N1186	3 2.21 6.64	42 38.5 22.9	147.55 -13.54	347.4 -11.3	.SBR4*.	4	P060C			1.52 .035	.38 .031	1.43 1.50	
I1876	3 2.4 4.32	-27 38 23.0	221.33 -60.51	273.7 -35.6						.87 .075	.00 .100	.87 1.00	
I0284	3 2.9 6.62	42 11 22.9	147.90 -13.87	347.1 -11.7	.SA.8..	8	P048N			1.60 .039	.26 .038	1.54 1.59	
N1209	3 3.71 4.70	-15 48.1 22.9	199.65 -56.74	288.2 -35.1	.E.6*. E 5	-5*	W100V			1.42 .224	.25 .112	1.59 1.40	0.83 .04
A0305-31	3 5.0 4.17	-31 38 22.8	229.48 -60.23	268.7 -36.1	.SXR6..	6	P048C	ED *K		1.46 .061	.17 .058	1.42 1.44	
N1218	3 5.82 5.27	3 55.2 22.6	174.07 -44.51	311.1 -30.6	.S...0..	0	P048N			1.11 .039	.08 .038	1.09 1.13	0.70 .02
N1229	3 6.0 4.47	-23 9 22.7	212.93 -58.84	279.2 -36.3	.SB.3*P	3	P200C			1.29 .039	.24 .038	1.24 1.26	
N1222 MK603	3 6.4 5.07	-3 9 22.6	182.60 -49.22	303.3 -33.0						1.12 .075	.05 .100	1.11 1.04	
I0292	3 7.0 6.56	40 35 22.4	149.43 -14.85	346.2 -13.2	.S...8*.	8*	P048N			1.09 .039	.24 .038	1.04 1.08	
N1232	3 7.50 4.54	-20 46.2 22.5	208.78 -57.81	282.2 -36.5	.SXT5..	5	P200V	S F	03VS	1.89 .032	.05 .021	1.88 1.90	1.55 .1
N1232A	3 7.77 4.54	-20 47.4 22.5	208.86 -57.76	282.2 -36.6	.SBS9..	9	P200V			.98 .079	.05 .050	.97 .98	
N1224	3 8.0 6.60	41 11 22.3	149.28 -14.24	346.8 -13.1	.L...*.	-3*	P048N			1.23 .071	.06 .071	1.21 1.31	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _e (U-B) _e (23)	Log S _R N _e N _H N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
A0245+02				.29											8845 0 1 100	8878 33	
A0245+26				.39													
A0245+03				.30													
N1104				.29								1.56 1 .01			1031 1 0 10	1067 36	
A0246-00 12 9		*		.29											7285 0 1 185	7303 18	
I1856				.29													
A0246+18				.34													
I1854		*		.34	*	*									10010 0 1 92	10099 89	
A0246+01				.29											9235 0 1 220	9327 92	
A0247-00				.29								1.52 1 .01			1109 1 0 10	1137 28	S
A0248+04				.30													
A0249-01				.29											990 0 1 100	1025 35	
N1136				.26								1.14 1 .01			1509 1 0 10	1521 12	
I0267				.33													
N1140	13.0 12.97	12.85 .08	12.9	.27 12.35	0.39 .02	-.30 .04	*	*	.26 -.39			1.51 1 .02	.41		1527 1 1 13	65 1503 -24	
N1143		14.5	13.0	.30	1.03	0.45	1.06	0.51									
V331		.13	14.5		.05	.06	.04	.04									
N1144		14.2	12.2	.30	0.86	0.16	0.93	0.29									
V331		.1	13.3		.04	.04	.06	.05									
A0253-27				.22													
A0254-02				.29											5272 0 1 40	5182 -90	
A0255+05. 32 52		14.3 .1	13.2	.32 13.87	1.20 .03	*	*	*	1.06	2.76 9 6 7	.77 .77		-4.17		7050 0 1 200	7052 2	
A0255-54	12.0 11.63			.26											7032* 0 3 53	7067 35	
A0255+41 52297			14.2	.63													
N1165				.21											4958 0 1 105	-174 5114 156	P
N1156	12.9 12.58	12.25 .08	12.9	.40 11.73 .31	0.56 .02	-.15 .04	0.51 .02	-.17 .04	.44 -.24			1.74 1 .01	.49		380 1 1 13	-109 485 105	PT
I0277															2700 0 1 200	2721 21	
N1161				.77													
N1160				.78													
N1163				.25												164	
N1167		13.4 .15		.52	1.06 .06	.64 .07			.89 .54	2.28 4 4 2	.51 .51		-1.88		4723 0 1 105	-56 4859 136	
N1172	13.1 12.68	12.90 .09	13.4 14.5	.26 12.61	0.89 .04	0.34 .04	0.91 .04	0.39 .04	.81 .29						1669 0 1 8	1621 -48	T
N1169	13.0 12.27	12.5 .2	13.5	.86	0.82 .05		0.90 .04										
N1179	13.0 12.21		15.1	.25													
N1187	11.3 10.93	*	15.2	.23	*	*				.908 1 0 1 2.45 11 5 7	.328 .325 .67 .67	1.34 1 .01			1413 1 1 26	-64 1334 -79	P
A0300+16		16.3 .1	14.1	.36	1.12 .02	0.56 .04	1.13 .03	0.59 .04							9732 0 2 24	9802 70	
N1175	13.0 13.02	13.80 .09	14.4	.69	1.01 .03	0.65 .06	*	*									
N1199	12.7 12.45	12.50 .13	12.3 14.1	.26 12.20 .22	1.03 .05	0.44 .06	1.05 .03	0.48 .04	.95 .39						2581 0 1 50	2528 -53	T
A0301-25																	
N1201	12.0 11.55	11.58 .09	12.3 14.1	.22 11.25 .72	0.94 .05	*	0.98 .02	0.54 .06	.86						1722 0 1 50	-89 1630 -92	PT
N1186																	
I1876		14.7 .15		.22	.29 .06	-.28 .07						.09 1 .01			6546 1 1 17	156 6449 -97	P
I0284				.71													
N1209	12.5 12.21	12.33 .06	12.0 13.8	.26 12.03 .21	0.98 .03	0.45 .06	0.99 .02	0.52 .04	.90 .40						2563 0 2 30	154 2508 -55	T
A0305-31															4907 0 1 200	4794 -113	
N1218		13.95 .05	12.9 14.1	.33 13.43 .23	1.14 .02	0.74 .06	1.16 .02	0.79 .06	.97 .69	2.86 16 3 6	.49 .51		-3.96		8650 0 1 120	8669 19	
N1229 V337															10585 0 1 86	10501 -84	P
N1222				.31													
I0292				.68											2700 0 1 200	2692 -8	
N1232															3017 0 1 150	3164 147	
N1232A	11.1 10.32	10.50 .09	13.7 14.7	.24 10.21 .24	0.63 .03	*	0.75 .04	*	.55						1720 0 2 37	1644 -76	PT
N1224				.70											1779 0 1 73	1702 -77	P
															5051 0 1 150	5199 148	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log(D ₀) Log Do (13)	Log A _e m.e. (14)
N1249	3 8.6	-53 32	268.23	242.5	.SB56..	6	S030V		1	1.72	.29	1.65	
	2.96	22.5	-53.41	-32.4			2.9		1	.069	.043	1.67	
I0298A	3 8.7	1 8	178.41	308.3	.RING.A	-2R	P200V			.79	.55	.67	
	5.19	22.3	-45.95	-32.2						.050	.050	.71	
I0298B	3 8.7	1 8	178.41	308.3	.RING.B	10R	P200V			.66	.00	.66	
	5.19	22.3	-45.95	-32.2			2.7			.050	.050	.68	
I0298.	3 8.7	1 8	178.41	308.3	.RING..		P200V						
	5.19	22.3	-45.95	-32.2									
N1241	3 8.82	-9 6.7	190.72	296.5	.SBT3..	3	W060V			1.48	.19	1.44	
	4.90	22.3	-52.31	-35.1	S 4 T		3.1	SX F	4VS	.042	.031	1.47	
N1242	3 8.89	-9 5.5	190.71	296.5	.SBT5..	5*	W060V			1.12	.26	1.06	
	4.90	22.3	-52.29	-35.1			2.3		3VS	.056	.049	1.08	
N1184	3 9.0	80 37	128.70	18.8	.S..0..	0	P048N			1.47	.56	1.34	
	15.51	21.7	19.60	10.3			2.0			.039	.038	1.42	
N1233	3 9.3	39 8	150.61	345.2	.S...3..	3	P048N			1.32	.38	1.23	
	6.51	22.2	-15.85	-14.4			1.8			.046	.045	1.29	
N1247	3 9.8	-10 40	193.09	294.7	.S...3..	3	P048N			1.56	.72	1.39	
	4.85	22.2	-52.95	-35.6			2.0			.039	.038	1.42	
I0302	3 10.2	4 31	175.36	312.2	.SBT4..	4	P048N			1.32	.04	1.31	
	5.29	22.2	-43.32	-31.6			2.2			.046	.045	1.34	
N1248	3 10.32	-5 24.5	186.26	301.0	.LAS0..	-2	P200V			1.11	.08	1.09	
	5.00	22.2	-49.86	-34.5			3.6		4 S	.129	.063	1.13	
N1255	3 11.38	-25 54.7	218.61	275.8	.SXT4..	4	W100V			1.61	.16	1.58	
	4.35	22.1	-58.26	-37.6	S 5	3	3.9		4VS	.030	.024	1.60	
A0311-25	3 11.6	-25 22	217.62	276.5	.I.....	10*	P048N			1.62	.58	1.49	
	11.37	22.1	-58.11	-37.7			2.2			.039	.038	1.50	
N1253	3 11.6	-3 0	183.68	303.9	.SXT6..	6	P200C			1.68	.26	1.62	
	5.07	22.0	-48.12	-34.2			4.2			.046	.045	1.64	
N1253A	3 11.87	-2 59.3	183.73	303.9	.SB59..	9	P200C			1.23	.22	1.18	
D 31	5.07	22.0	-48.06	-34.2	I	9*	3.4			.039	.038	1.20	
N1250	3 12.06	41 10.2	149.95	347.2	.L...*/	-1*	P048C			1.43	.40	1.34	
	6.62	21.9	-13.85	-13.7			2.0			.050	.050	1.43	
A0312-04	3 12.15	-4 57.8	186.14	301.6	.I...9..	10	P048F			1.29	.06	1.27	
D 32	5.01	22.0	-49.23	-34.9	I	9	2.1			.061	.058	1.29	
I0309	3 12.82	40 37.2	150.38	346.9	.LAS0..	-2	P048C			1.01	.00	1.01	
	6.60	21.8	-14.23	-14.1			1.6			.042	.045	1.11	
A0313-03	3 13.1	-3 38	184.77	303.3									
Mk605	5.05	21.9	-48.22	-34.7									
I0310	3 13.41	41 8.6	150.19	347.4	.LAR0..	-2	P048C			1.20	.00	1.20	
	6.63	21.7	-13.73	-13.9			2.0			.050	.050	1.30	
A0313-31	3 13.9	31 23	155.93	339.0	.SA55..	5	P048N			1.28	.07	1.27	
	6.19	21.7	-21.82	-19.5			2.1			.039	.038	1.31	
N1260	3 14.16	41 13.3	150.27	347.5	.L...*/	-1*	P048C			1.23	.35	1.15	
	6.64	21.7	-13.59	-14.0			1.7			.071	.071	1.25	
I0312	3 14.83	41 34.3	150.18	347.9	.E.6.*	-5*	P048C			1.17	.29	1.10	
	6.66	21.6	-13.23	-13.9			1.6			.071	.071	1.22	
N1265	3 14.95	41 40.6	150.14	348.0	.LA...-	-3	P048C			1.32	.05	1.31	
	6.67	21.6	-13.13	-13.8			2.2			.071	.071	1.42	
N1288	3 15.20	-32 45.6	231.71	267.1	.SA54..	4	P048C			1.37	.03	1.36	
	4.08	21.7	-58.08	-38.1	S 3 *	1	2.3			.053	.044	1.38	
N1267	3 15.44	41 17.2	150.44	347.7	.LA...*	-3	P048C			1.14	.08	1.12	
	6.65	21.5	-13.41	-14.1			1.8			.071	.071	1.23	
N1268	3 15.45	41 18.4	150.43	347.7	.SAT3..	3	P048C			1.08	.15	1.04	
	6.65	21.5	-13.39	-14.1			1.6			.039	.038	1.12	
N1291	3 15.48	-41 18.5	247.56	256.4	RSB50..	0	C050V			2.02	.06	2.01	
	3.68	21.7	-57.04	-36.9			4.3		3	.032	.023	2.04	
N1270	3 15.66	41 17.3	150.47	347.7	.E.3.*	-5*	P048C			1.06	.10	1.04	
	6.65	21.5	-13.38	-14.2	E 2		1.6		4	.071	.071	1.16	
N1271	3 15.89	41 10.3	150.58	347.7	.LB...s	-2	P048C						
	6.64	21.5	-13.46	-14.3									
N1272	3 16.04	41 18.5	150.52	347.8	.LAS...-	-3	P048C			1.40	.04	1.39	
	6.65	21.5	-13.33	-14.2			2.3			.071	.071	1.50	
N1292	3 16.13	-27 47.6	222.43	273.4	.SASS..	-5	W100V			1.50	.28	1.43	
	4.27	21.6	-57.52	-38.7			3.5			.049	.038	1.45	
N1273	3 16.13	41 21.6	150.51	347.9	.LAR0s.	2	P048C			1.15	.00	1.15	
	6.66	21.4	-13.27	-14.2			1.9			.316	.158	1.25	
N1274	3 16.37	41 22.1	150.54	347.9	.E.3...-	-5	P048C			.75	.10	.73	
	6.66	21.4	-13.24	-14.2			1.0			.075	.100	.85	
A0316-26	3 16.4	-26 1	219.20	275.7	.S...4..	4	P048N			1.45	.39	1.36	
	4.34	21.5	-57.17	-38.7			2.1			.039	.038	1.38	
N1275	3 16.50	41 19.8	150.59	347.9	.P.....	-2	P200V			1.41	.12	1.39	
	6.66	21.4	-13.26	-14.3			4.1	F2P K		.045	.037	1.49	
N1277	3 16.55	41 23.5	150.56	347.9	.L...*P	-1*	P048C			.90	.41	.80	
	6.66	21.4	-13.20	-14.2			1.0			.042	.045	.90	
N1278	3 16.59	41 23.0	150.57	347.9	.E.2.P*	-5	P048C			1.23	.08	1.21	
	6.66	21.4	-13.21	-14.2			2.0			.069	.063	1.33	
N1281	3 16.78	41 26.9	150.56	348.0	.E.5...-	-5	P048C			.84	.18	.80	
	6.66	21.4	-13.13	-14.2			1.1			.075	.100	.92	
N1282	3 16.89	41 11.2	150.73	347.8	.E.1.*	-5*	P048C			1.23	.10	1.21	
	6.65	21.4	-13.34	-14.4			1.9			.071	.071	1.33	
N1283	3 16.95	41 13.1	150.72	347.8	.E.1.*	-5*	P048C			1.10	.21	1.05	
	6.65	21.3	-13.31	-14.4			1.6			.071	.071	1.17	
N1297	3 16.98	-19 16.8	207.60	284.3	.LA...*	-3	P048C			1.37	.07	1.35	
	4.57	21.5	-55.21	-38.6	E 2		2.2	D GK*		.183	.095	1.39	
A0317-03	3 17.2	3 58	177.57	312.3									
Mk606	5.28	21.4	-42.46	-33.2									
N1300	3 17.42	-19 35.5	208.17	283.9	.SBT4..	4	P200V			1.81	.18	1.77	
	4.56	21.4	-55.22	-38.7	SB3	1	4.9	B F	4	.029	.021	1.79	
I1913	3 17.55	-32 38.8	231.50	267.2	.SB.3s/	3	P048C			1.27	.80	1.08	
	4.07	21.4	-57.59	-38.6			1.3	B G	5VS	.061	.058	1.10	
N1313	3 17.65	-66 40.7	283.37	228.0	.SB57..	7	S074V			1.93	.11	1.90	
	1.27	21.6	-44.64	-28.2			4.3		2	.029	.020	1.92	
I0313	3 17.65	41 42.8	150.55	348.3	.LA...*	-3	P048C			1.20	.15	1.16	
	6.68	21.3	-12.82	-14.2			1.8			.071	.071	1.27	
N1298	3 17.7	-2 17	184.27	305.3	.E.1.*	-5*	P048N			1.17	.04	1.16	
	5.09	21.4	-46.48	-35.4			1.9			.071	.071	1.21	
N1302	3 17.71	-26 14.4	219.70	275.4	RSB50..	0	P200V			1.64	.02	1.64	
	4.32	21.4	-56.92	-39.0	SX0		4.7	B K	5	.040	.029	1.67	
N1293	3 18.30	41 12.8	150.94	348.0	.E.0...-	-5	P048C			1.06	.00	1.06	
	6.66	21.2	-13.17	-14.6			1.7			.069	.065	1.18	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m ₂₈ m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)	
N1249	12.3			.25												
10298A	11.80		14.5	.32												-178
12 11				.32											5	P
10298B				.32											5	P
12 11				.32											5	P
10298C				.29											9265	9270
12 11															0 1 105	5
N1241	13.0		14.4	.29												-34
V334	12.66			.29												-34
N1242				.29												-34
V334				.68												-34
N1184				.65												220
N1233	14.0		14.5	.65	.81	.24			.56	2.30	.66		-2.16		4765	4906
N1247	.15			.28	.06	.07			.05	5 3 0					0 1 165	141
I0302				.33												-40
				.30											5911	5928
N1248				.22					.43						1 0 15	17
N1255	12.1	11.6	13.3	.22	0.52	-1.10	0.60	0.00	.43						1836	1738
A0311-25	11.73	.13	14.1	.23	.05	.05	.04	.04	-1.17						0 1 39	-98
N1253				.31												-96
N1253A				.31								1.73			1707	1695
				.73								1 .01			1 0 10	-12
N1250				.31												-13
A0312-04				.72											6198	6343
I0309				.74								.81			0 1 150	145
A0313-03				.52								1 .01			2215	2195
I0310				.75											1 0 15	-20
A0313-31				.76											4238	4381
N1260				.77											0 1 150	-143
I0312				.21											8400	8384
N1265	*			.21											0 1 200	-16
N1288	13.0	12.80	13.5	.21	0.69	0.05	0.75	0.15	.61	2.93	.58				5651*	5795
N1267	12.75	.08	14.4	.21	.04	.04	.03	.03	-1.01	8 2 2	.73				0 2 52	144
N1268				.76											4212	4325
N1291	10.2	9.425	12.2	.21	0.93	0.44	0.95	0.50	.86						1 1 81	113
N1270	9.43	.06	14.2	.916	.03	.04	.03	.03	.39	1.30*	1.38*	2.25	4.195		5519	5663
N1271		14.05	12.4	.76	1.16	0.79	1.17	0.83	.94	0 1 2		1 .01	1.78		1 2 59	-143
N1272		.08	14.1	.76	.03	.04	.03	.04	.63						4905	5048
															0 1 65	143
N1272		*		.76	*	*	*	*	*						5751	5894
N1292				.22											0 1 150	143
N1273	12.8			.77											4197	4340
N1274	12.59			.77											0 1 112	143
		14.05	13.5	.77	1.15	*	1.12	0.73	.93						1451	1343
		.08	14.7	.77	.03		.03	.06							0 1 146	-108
A0316-26				.23											5354	5497
															0 1 50	143
N1275	12.7	12.35	12.6	.77	0.76	0.10	0.77	0.05	.52	3.15	.69				6472	6615
N1277	12.44	.05	14.0	.77	.03	.06	.04	.06	-.01	24 816	-.80				0 1 120	143
N1278		14.6	12.3	.77	.04		.03		.84						5218	5361
N1281		.1	12.9	.77	.04		.03		.84						0 2 24	143
N1282		13.65	13.0	.77	1.07	*	1.08	0.75	.84						4974	5117
		.08	14.6	.77	.05		.03	.06	.89						0 1 50	143
		14.6	13.3	.77	1.10										6115	6258
		.15		.76	.06										0 1 50	143
		*			*										4256	4399
N1283				.77											0 1 150	143
N1297	13.0			.25											2200	2342
A0317-03	12.61		14.2	.34											0 1 150	142
N1300	11.8	11.10	14.0	.25	0.68	0.13	0.79	0.22	.58						6724	6866
I1913	11.10	.06	14.5	.21	.03	.04	.02	.02	.06						0 1 150	142
															1550	1471
N1313	10.8	9.375	13.6	.33	*	*				1.60	.555				0 1 28	-79
I0313	10.23	.13		.79						2 2 6	1.26				9000	9009
N1298				.32											0 1 100	9
N1302		*		.23	*	*									1502	1422
N1293	11.9			.78	*	*									1 1 10	-80
	11.38		14.4		*	*									1287	1162
															0 1 146	-125
															448	241
															1 2 8	-207
															4433	4576
															0 1 150	143
															6634	6619
															0 1 30	-15
															1730	1626
															0 1 75	-104
															4132	4273
															0 1 150	141

NGC IC, A Mr, DDO (1)	Coordinates				Classification					Diameters			
	RA IOOP (2)	Dec IOOP (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log Ae m.e. (13)
N1294	3 18.36	41 10.9	150.97	348.0	.LA.-*.	-3	P048C			1.25	.05	1.24	
	6.66	21.2	-13.19	-14.6			2.0			.069	.065	1.35	
N1305	3 18.86	-2 29.9	184.78	305.1	.E.2.*.	-5*	P048C			1.27	.12	1.24	
	5.08	21.2	-46.39	-35.8			2.0			.067	.059	1.29	
N1310	3 19.1	-37 19	240.11	261.2	.SAS5*.	5*	W100V			1.37	.12	1.34	
	3.86	21.3	-57.03	-38.3			3.4			.141	.088	1.36	
N1313A	3 19.52	-66 52.9	283.41	227.7	.S...*.		S030V						
	1.21	21.4	-44.37	-28.3									
N1309	3 19.78	-15 34.7	202.21	289.1	.SAS4*.	4*	W060V	S F		1.37	.02	1.37	0.90
	4.68	21.1	-53.16	-38.9	S 5	4	3.1	OS G	3 S	.043	.031	1.39	.04
N1316	3 20.78	-37 23.1	240.17	261.0	PLX50P.	-2	W100V			1.85	.11	1.82	1.19
	3.85	21.1	-56.69	-38.6			4.4			.034	.020	1.85	.03
N1317	3 20.85	-37 16.9	239.98	261.2	PSXT1..	1	P074V			1.50	.06	1.49	0.95
	3.86	23.8	-56.65	-38.7			3.5		5	.033	.023	1.51	.04
N1315	3 20.89	-21 33.2	211.88	281.5	.LBT.*.	-1	W060V			1.26	.00	1.26	
	4.48	21.0	-55.08	-39.7			2.9		3 S	.075	.100	1.29	
N1319	3 21.72	-21 42.3	212.23	281.3	.L....	-2	W060V			1.12	.29	1.05	
	4.47	20.9	-54.95	-39.9			2.3			.041	.042	1.08	
N1326	3 22.02	-36 38.4	238.78	261.9	RLBR*..	-1	W100V	B *K *		1.60	.12	1.57	1.05
	3.88	20.9	-56.52	-39.0			3.9		4	.069	.034	1.60	.04
N1325	3 22.20	-21 43.3	212.32	281.3	.SAS4*.	4	W060V			1.66	.41	1.56	
	4.47	20.9	-54.84	-40.0	S 3 NK-		3.3	SD F	3 S	.032	.024	1.58	
N1320	3 22.3	-3 12	186.34	304.6						1.27	.42	1.18	
Mr 607	5.06	20.8	-46.15	-36.8						.075	.100		
N1325A	3 22.58	-21 30.8	212.02	281.5	.SBR3S.	3S	W060V			1.41	.03	1.40	
	4.48	20.8	-54.70	-40.1			3.2		3 S	.057	.039	1.42	
A0322-06	3 22.9	-6 19	190.17	300.9									
Mr 609	4.97	20.8	-47.86	-37.8									
N1316C	3 23.0	-37 12	239.75	261.2	.S...0*.	0*	P048C			1.24	.38	1.15	
	3.85	20.8	-56.27	-39.1			1.4			.158	.105	1.18	
A0323-06	3 23.0	-6 18	190.17	300.9									
Mr 610	4.97	20.8	-47.83	-37.8									
N1326A	3 23.1	-36 31	239.52	262.0	.SBR9*.	9	P048C			1.16	.05	1.15	
	3.88	20.8	-56.31	-34.2			1.5			.158	.100	1.16	
N1326B	3 23.3	-36 31	238.52	262.0	.SBR57*.	7*	P048C			1.58	.53	1.46	
	3.88	20.8	-56.27	-39.3			1.9			.120	.077	1.47	
A0323-00	3 23.6	-0 22	183.48	308.1									
Mr 611	5.15	20.7	-44.13	-36.2									
N1332	3 24.06	-21 30.5	212.19	281.6	.L.S-*/	-3	W100V	D K	3	1.66	.42	1.56	1.0
	4.47	20.7	-54.37	-40.4	E 7		3.7	DE K	04	.048	.030	1.60	.07
N1331	3 24.25	-21 31.7	212.24	281.5	.E.2.*.	-5*	W100V			1.03	.04	1.02	
	4.47	20.7	-54.33	-40.5			2.8			.224	.129	1.06	
I1933	3 24.3	-52 57	265.52	242.1	.SA.6*.	6	S030V			1.39	.20	1.34	
	2.87	20.7	-51.63	-34.9			2.3			.141	.085	1.36	
A0325+02	3 25.31	2 23.4	180.98	311.5	.E.3.*.	-5*	P048N			1.17	.14	1.14	0.85
	5.23	20.5	-42.02	-35.7			1.8			.051	.058	1.19	.03
N1337	3 25.66	-8 33.8	193.55	298.3	.SAS6*.	6	W060V			1.83	.52	1.71	1.35
	2.90	20.5	-48.52	-39.0	S 6	7*	3.5	S AF	2	.043	.029	1.73	.05
A0325-17	3 25.9	-17 36	206.26	286.7	.E.6.*P	-5S	P048N			.90	.31	.82	
	4.60	20.5	-52.63	-40.6			1.1			.042	.045	.86	
N1341	3 26.1	-37 19	239.86	260.9	.SBS1..	1	S030V			1.20	.01	1.20	
	3.83	20.5	-55.65	-39.7			2.2		2	.158	.105	1.22	
N1339	3 26.10	-32 27.5	231.23	267.1	.E.4...*	-5	P048C			1.36	.08	1.34	
	4.05	20.5	-55.78	-40.4	E 2		2.2			.067	.062	1.37	
A0326+39	3 26.11	39 37.2	153.13	347.6						1.19	.00	1.19	
	6.62	20.3	-13.65	-16.8						.071	.071		
N1344	3 26.30	-31 14.5	229.08	268.7	.E.S...*	-5	W100V	ES K		1.59	.22	1.54	1.05
	4.10	20.4	-55.68	-40.6	E 3		3.8			.088	.044	1.57	.06
N1351A	3 26.9	-35 21	236.36	263.4	.SBS15*.	5	P048C			1.55	.68	1.39	
	3.92	20.4	-55.61	-40.2			1.7			.183	.120	1.41	
N1345	3 27.1	-17 58	206.99	286.3	.S...P.		P048N			1.16	.10	1.14	
	4.59	20.3	-52.50	-40.9			1.8			.046	.045	1.17	
A0327-04	3 27.7	-4 24	188.88	303.6	.SBS4..	4	P048C			1.15	.18	1.11	
	5.02	20.2	-45.78	-38.4			1.7			.061	.058	1.14	
A0328-03	3 28.2	-3 16	187.68	305.1									
Mr 612	3 28.6	-35 2	235.79	263.7	.LA.-*.	-3*	S030C			1.26	.18	1.22	
N1351	3 28.6	-35 2	235.79	263.7			1.6		4	.129	.066	1.25	
N1350	3 29.17	-33 47.9	233.62	265.3	PSBR2..	2	P048C			1.63	.25	1.57	1.10
	3.98	20.1	-55.17	-40.9			2.3			.082	.051	1.59	.04
N1353	3 29.83	-20 59.2	212.04	282.3	.SBS3*.	3*	W060V			1.53	.34	1.45	1.05
	4.48	20.0	-52.93	-39.7	S 3	4	3.1	S FG	4VS	.032	.026	1.47	.04
I1954	3 30.2	-52 5	263.66	242.7	.SBS3*.	3	S030V			1.56	.28	1.49	
	2.90	20.1	-51.18	-36.0			2.6		3 S	.082	.051	1.51	
N1355	3 30.91	-5 10.1	190.44	303.0	.L....	-2	W060V			1.26	.54	1.13	
	5.00	19.9	-45.56	-39.4			2.3		4VS	.071	.071	1.17	
N1357	3 30.94	-13 59.8	201.79	291.7	.SAS2..	2	W060V			1.39	.14	1.36	.95
	4.72	19.9	-50.04	-41.3	S 5		3.0	S GK	03 S	.053	.044	1.39	.04
A0331+39	3 31.02	39 11.4	154.18	347.9	.E.1.S.	-5*	P048N			1.23	.04	1.22	
	6.62	19.7	-13.44	-17.8			2.0			.051	.058	1.34	
N1358	3 31.18	-5 15.5	190.60	302.9	.SXR0..	0	W060V			1.45	.12	1.42	1.00
	4.99	19.8	-45.56	-39.5	SX2	3*	3.1		4VS	.053	.043	1.46	.04
I1953	3 31.49	-21 38.7	213.27	281.5	.SBS7..	7	W060V			1.45	.09	1.43	
	4.45	19.8	-52.76	-42.1	S 5 K	4*	3.2	SX F	1	.032	.028	1.45	
N1359	3 31.55	-19 39.5	210.19	284.1	.SBS9SP	9*	P200V			1.29	.07	1.27	
	4.52	19.8	-52.12	-42.1	SBS7P	7	3.9	SIP*A *		.040	.029	1.28	
N1365	3 31.70	-36 18.3	237.96	261.9	.SBS3..	3	W100V	B FG	25	1.99	.25	1.93	1.55
	3.85	19.8	-54.60	-41.0		2	4.5		5	.025	.017	1.95	.04
N1366	3 31.87	-31 21.6	229.43	268.4	.L....	-1	P048C			1.43	.34	1.35	
	4.07	19.8	-54.50	-41.8	E 6		2.1			.071	.077	1.38	
N1343	3 32.4	72 24	134.75	13.3	.SXS3*P	3*	P048C			1.45	.18	1.40	1.05
	10.90	19.3	13.63	4.0			2.3			.039	.038	1.50	.05
N1371	3 32.88	-25 5.9	218.96	276.8	.SXT1..	1	P200V			1.73	.13	1.70	
	4.32	19.7	-53.35	-42.5	SX0		4.7		4 S	.036	.028	1.73	
N1375	3 33.3	-35 26	236.44	262.9	.L....	-2*	S030V			1.28	.48	1.17	
	3.89	19.6	-54.30	-41.5			1.4			.224	.195	1.20	
N1374	3 33.4	-35 24	236.38	263.0	.E.0...*	-5	S030V			.01	.01	1.26	
	3.89	19.6	-54.28	-41.5					3	1.29	.067	1.29	
N1379	3 34.2	-35 37	236.75	262.7	.E.0...*	-5	S030V			1.30	.02	1.30	
	3.88	19.5	-54.12	-41.6			1.9		3	.129	.065	1.33	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _C (15)	B _T m.e. (16)	m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _g (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)		
N1294		14.2		.78	1.09				.85						6552	6693	
N1305		.15	15.2	13.31 .32	.06										0 1 150	141	
N1310				.21											1715	1574	S
N1313A				.33											0 1 146	-141	
N1309	11.8 11.93	12.00 .09	12.0 13.6	.27 11.70	0.45 .04	-.18 .04	0.54 .03	-.05 .03	.37 -.24	.85% 1 0 1	.23% .23%		2.79%	2262 0 1 30	2195 -67		P
N1316	10.1 9.73	9.675 .07	11.1 13.5	.21 9.39	0.90 .03	0.49 .04	0.94 .02	0.54 .02	.83 .44	4.02 7 1 4	.78 .21*		-2.84	1774 0 5 25	1632 -142		PT
N1317	12.2 11.94	11.945 .09	12.2 14.1	.21 11.66 .24	0.93 .03	0.30 .05	0.96 .03	0.34 .04	.85 .25					2060 0 1 100	1918 -142		PT
N1315														1730 0 1 73	1640 -90		
N1319				.24										4112 0 1 104	4021 -91		
N1326	11.8 11.43	11.30 .08	12.0 13.9	.21 11.00	0.82 .04	0.27 .06	0.86 .03	0.30 .04	.74 .22			1.12 1 .01	2.76	1308* 1 2 15	1167 -141		PT
N1325	12.9* 12.11	12.32 .11	14.4	.24 11.74 .32	.77 .07				.63					1635* 0 2 22	1543 -92		T
N1320														3000 0 1 200	2978 -22		
N1325A		13.43 .11	15.3	.24 .31	.60 .07												T
A0322-06				.21										9000 0 1 200	8965 -35		
N1316C				.21										2066 0 1 146	1923 -143		
A0323-06				.31										10050 0 1 200	10015 -35		
N1326A				.21											-141 781		
N1326B				.21										0 1 104	639 -142		
A0323-00				.34										8850 0 1 200	8837 -13		
N1332	11.4 11.17	11.2 .13	11.7 13.3	.25 10.84	0.90 .05		1.00 .04		.81					1564 0 2 42	1471 -93		
N1331		*		.25	*									1326 0 1 84	1233 -93		
I1933	13.2 13.01		14.3 14.5	.25 14.26	.25										-185 9070		
A0325+02		14.75 .05	15.2 14.4	.35 14.26	1.11 .03		1.12 .02		.95	2.67 10 6 6	.57 .69		-4.33	0 1 120	9067 -3		
N1337	12.7 12.05	12.2 .1	14.4 14.9	.30 11.48	0.56 .05	*	0.63 .03	0.10 .04	.38			1.57 1 .03	1.11	1235 1 0 10	1189 -46		T
A0325-17		14.9 .15	13.6 14.61	.26 14.61	.57 .06	-.29 .07			.49 -.32			1.01 1 .02	1.90	1834 1 1 11	1754 -80		
N1341	13.1 13.18		14.0	.21										1830 0 1 104	1684 -146		
N1339	12.8 12.49		14.1	.21 .78										1326 0 1 104	1195 -131		
A0326+39										2.11 1 1 2	.31% 1.19%			7290 0 1 120	7421 131		
N1344	11.6 11.22	11.25 .09	12.0 13.6	.22 11.01 .21	0.93 .05	0.45 .06	0.93 .04	0.50 .04	.87 .41					1215* 0 2 66	1088 -127		
N1351A															-141		
N1345		14.2 .15	14.6	.26 13.85 .32	.48 .06	-.20 .07			.39 -.26					1527 1 1 15	1445 -82		
A0327-04												1 .01	.79	8386 1 1 16	8354 -32		
A0328-03				.33										6300 0 1 200	6272 -28		
N1351	12.8 12.76		13.6	.21										1491 0 1 94	1350 -141		
N1350	11.8 11.59	11.40 .09	12.4 13.8	.21 10.97	0.88 .05	0.39 .05	0.90 .03	0.49 .03	.77 .30					1786 0 2 20	1649 -137		PS
N1353	12.4 12.30	12.25 .09	13.0 13.9	.25 11.72 .25	0.90 .05	0.28 .05	0.94 .04	0.37 .04	.77 .16					1700 0 1 146	1605 -95		P
I1954	12.2 12.05		14.0												-186		
N1355		14.05 .08	13.9	.32	0.96 .03	0.43 .03	*	*							-38		
N1357	12.5 12.48	12.60 .07	12.8 14.0	.28 .80	0.93 .03	0.26 .03	0.95 .03	0.35 .03							-71		
A0331+39		*			*	*				2.01 3 2 1	.48 .48%			6103 0 2 41	6230 127		
N1358	13.1 12.73	13.0 .1	13.5 14.8	.32 .25	0.94 .03	0.45 .04	1.00 .03	0.52 .03							-38 1902		
I1953	12.5 12.28		14.2											2001 0 2 52	-99		
N1359	12.8 12.68	12.6 .15	13.7 12.27	.26 12.27	.39 .06				.30					1881 0 1 58	1789 -92		
N1365	11.2 10.37	10.145 .09	13.4 14.3	.21 9.72 .22	0.62 .05	0.05 .05	0.71 .03	0.12 .03	.51 -.03	1.79 1 4 6	.60% .81	*	2.40	1649 0 3 39	1502 -147		PS
N1366	13.0 12.81		14.0											1255 0 1 104	1123 -132		
N1343 72 8		13.3 .13	14.0 14.9	.97 .23	1.02 .05	*	1.11 .04	*							207 1397		
N1371	12.2 11.50	*	14.7	.21	*	*								1509 0 1 104	-112 524		
N1375		*		.21	*	*								0 1 104	-145		
N1374	12.4 12.38	*	13.6	.21	*	*								1251 0 1 82	1106 -145		
N1379	12.3 12.23	*	13.7	.21	*	*								1386 0 1 92	1239 -147		

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₁₀ Log D ₀ (13)	Log A _e m.e. (14)
N1380	3 34.52 3.90	-35 8.4 19.5	235.93 -54.06	263.3 -41.8	.LA....	-2	SU30V 2.2		4	1.69 .095	.41 .048	1.59 1.62	.95 .05
N1376	3 34.62 4.99	-5 12.5 19.4	191.23 -44.82	303.3 -40.3	.SA56..	6	W100V 3.9	S AF	3 S	1.30 .046	.02 .035	1.30 1.33	
N1381	3 34.7 3.88	-35 28 19.5	236.49 -54.02	262.8 -41.7	.LA.../	-2	SU30V 1.7	D K	4 S	1.46 .085	.54 .044	1.33 1.36	
I1970	3 34.8 3.42	-44 7 19.5	250.94 -52.95	251.8 -39.6	.S...3*/	3*	P048C 1.5			1.49 .129	.71 .085	1.32 1.34	
N1380A	3 34.8 3.91	-34 53 19.5	235.50 -54.01	263.6 -41.9	.S...25/	25	P048C 1.6		3 S	1.45 .316	.62 .183	1.30 1.32	
N1386	3 35.0 3.85	-36 10 19.4	237.68 -53.94	261.9 -41.7	.S...1..	1	P048C 2.0		3 S	1.54 .085	.37 .043	1.45 1.47	
N1387	3 35.1 3.87	-35 41 19.4	236.85 -53.93	262.5 -41.8	.L...*	-3	SU30V 2.0		4	1.38 .120	.03 .060	1.37 1.40	
N1380B	3 35.1 3.88	-35 21 19.4	236.29 -53.94	263.0 -41.8	.L...*	-1*	P048C 3.7						
N1389	3 35.3 3.86	-35 55 19.4	237.25 -53.89	262.2 -41.8	.E...*	-5*	SU30V 1.9		3	1.33 .129	.17 .062	1.29 1.32	
N1385	3 35.33 4.33	-24 39.9 19.4	218.47 -52.71	277.4 -43.0	.SB56..	6	W100V 3.6	SI *AF S P A *		1.48 .039	.18 .028	1.46 1.46	1.00 .05
N1395	3 36.32 4.38	-23 11.4 19.3	216.22 -52.12	279.4 -43.3	.E...*	-5	W100V E 3	E2 K E3 K		1.51 .100	.11 .049	1.48 1.52	
N1393	3 36.39 4.55	-18 35.2 19.2	209.43 -52.52	285.7 -39.9	.LA...*	-1	P048C 2.1		4	1.25 .316	.13 .129	1.22 1.46	
N1399	3 36.58 3.87	-35 36.7 19.3	236.72 -53.63	262.5 -42.1	.E...1.P.	-5	C060C 3.4	E1 K	3	1.51 .112	.02 .055	1.25 1.54	0.98 .05
N1398	3 36.75 4.26	-26 29.9 19.2	221.54 -52.79	274.8 -43.3	.PSBR2..	2	P200V SX2	R K	3 L	1.82 .034	.10 .026	1.80 1.82	
N1394	3 36.86 4.55	-18 27.1 19.2	209.08 -50.52	285.9 -43.2	.L...05/	-25	P048C 1.4			1.19 .067	.54 .100	1.06 1.09	
N1404	3 37.0 3.86	-35 45 19.2	236.95 -53.55	262.3 -42.1	.E...1..	-5	C060C 3.1	E1 K	3	1.39 .120	.03 .060	1.38 1.41	0.70 .05
N1411	3 37.1 3.40	-44 15 19.2	251.01 -52.52	251.5 -39.9	.L...R..	-3	S030C 2.1		4	1.45 .316	.09 .129	1.43 1.46	
N1401	3 37.18 4.39	-22 53.2 19.2	215.83 -51.85	279.8 -43.5	.LB...*/	-2	P048C 1.9			1.44 .075	.57 .100	1.31 1.34	
N1400	3 37.26 4.54	-18 50.9 19.1	209.71 -50.57	285.4 -43.4	.LA...-	-3	W060V E 1		3	1.28 .100	.05 .065	1.27 1.42	0.81 .04
N1406	3 37.38 4.05	-31 29.0 19.1	229.79 -53.34	268.0 -42.9	.SB545/	4	P048C 2.1	E2 K	03 S	1.59 .036	.61 .032	1.45 1.47	
N1427A	3 37.7 3.85	-35 47 19.1	237.00 -53.40	262.3 -42.3	.IBS9..	10	P048C 1.7			1.32 .141	.20 .091	1.27 1.28	
I0343	3 37.86 4.55	-18 36.2 19.1	209.43 -50.35	285.7 -39.9	.LBS...*	-1	P048C 1.6			1.15 .069	.25 .100	1.09 1.12	
N1407	3 37.95 4.54	-18 44.4 19.1	209.64 -50.38	285.5 -43.5	.E...0..	-5	W060V E 0		3	1.39 .100	.00 .051	1.39 1.43	1.1 .1
N1409	3 38.7 5.11	-1 27 18.9	187.82 -41.82	308.4 -40.1	.LX...P	-2	P200C 3.3	ED *K	03 S	1.12 .075	.10 .100	1.10 1.15	
N1410	3 38.7 5.11	-1 27 18.9	187.82 -41.82	308.4 -40.1	.E...1.SP	-55	P200C 4.2						
N1415	3 38.77 4.40	-22 43.4 19.0	215.74 -51.45	280.0 -43.8	.RSXS0..	0	W100V S 4 T *		4	1.56 .045	.24 .034	1.50 1.53	
N1416	3 38.87 4.39	-22 52.7 19.0	215.99 -51.47	279.8 -43.9	.E...1..	-5*	W100V 3.2	DS GK*	3VS	1.19 .073	.00 .082	1.19 1.23	
N1422	3 39.33 4.43	-21 50.4 18.7	214.44 -51.08	281.3 -44.0	.SB...35/	3	P048C 3.3			1.32 .056	.50 .048	1.20 1.22	
N1417	3 39.47 5.00	-4 51.9 18.8	191.77 -43.63	304.2 -41.4	.SXT3..	3	P200V S 3		3	1.42 .042	.18 .031	1.41 1.44	0.95 .05
I0346	3 39.49 4.55	-18 25.6 18.9	209.39 -49.93	286.0 -43.9	.LBS...*	-1	P048C 2.0	SX FG	4 S	1.35 .067	.29 .071	1.28 1.31	
N1418	3 39.79 5.00	-4 53.5 18.8	191.87 -43.58	304.1 -41.5	.SB53..	3*	P200V S 3		3 S	1.18 .085	.11 .054	1.15 1.18	
N1421	3 40.15 4.71	-13 38.9 18.8	202.81 -47.88	292.6 -43.5	.SKT4..	4	W060V S 4		3VS	1.53 .040	.54 .029	1.43 1.46	1.205 .04
N1425	3 40.16 4.10	-30 3.2 18.8	227.53 -52.60	269.9 -43.7	.SAS3..	3	W100V S 3		4VS	1.73 .033	.30 .028	1.66 1.68	
N1427	3 40.4 3.85	-35 34 18.8	236.63 -52.86	262.4 -42.8	.E...3..	-5	S030V 2.0		3 S	1.45 .141	.14 .073	1.42 1.45	
N1433	3 40.45 3.18	-47 22.8 18.8	255.70 -51.20	247.4 -39.3	.SBR1..	1	S074V 4.2		5 S	1.83 .031	.05 .021	1.82 1.85	1.40 .06
N1428	3 40.5 3.86	-35 19 18.8	236.22 -52.84	262.7 -42.9	.L...S..	-25	S030V 1.9		3 S	1.26 .224	.38 .129	1.17 1.20	
A0340+39	3 40.6 6.66	39 9 18.6	155.72 -12.35	349.1 -19.2	.L...*	-3*	P048N 1.8			1.17 .071	.08 .071	1.15 1.28	
N1426	3 40.63 4.41	-22 16.0 18.7	215.23 -50.91	280.7 -44.3	.E...4..	-5	W100V E 2		3 S	1.33 .141	.15 .071	1.29 1.33	0.90 .05
N1424	3 40.75 5.00	-4 53.4 18.7	192.05 -43.38	304.2 -41.7	.SXT3..	3*	W100V 3.1	E4 K	3 S	1.32 .056	.38 .048	1.23 1.26	
N1437	3 41.7 3.83	-36 1 18.6	237.37 -52.59	261.7 -43.0	.SBR1..	1	S030V 2.1		4VS 3VS	1.46 .112	.13 .069	1.43 1.45	
I0342	3 41.96 9.76	67 56.4 18.3	138.18 -10.58	10.6 -4.4	.SXT6..	6	P200V S 0		4	2.25 .035	.01 .027	2.25 2.35	2.15 .1
N1439	3 42.64 4.41	-22 4.6 18.5	215.16 -50.41	280.9 -44.7	.E...1..	-5	W060V E 1		4	1.37 .141	.03 .069	1.36 1.40	
N1440	3 42.79 4.54	-18 25.3 18.5	209.81 -49.20	286.1 -44.6	.LBT05..	-2	P048C SX0	E1 K	3VS	1.36 .067	.08 .073	1.34 1.38	
N1448	3 42.88 3.33	-44 48.0 18.5	251.53 -51.39	250.3 -40.7	.SA...6*/	6	S030V S 2	R K	3 S	1.91 .038	.65 .024	1.76 1.78	
N1452	3 43.12 4.53	-18 47.3 18.4	210.38 -49.25	285.6 -44.7	.PSBR0..	0	P048C SB0			1.24 .054	.06 .049	1.23 1.26	
N1438	3 43.2 4.37	-23 10 18.4	216.86 -50.59	279.4 -44.9	.L...S..	-25	S030V 2.2			1.42 .075	.33 .100	1.35 1.38	
N1441	3 43.22 5.02	-4 14.9 18.4	191.79 -42.51	305.3 -42.1	.SB53..	3	W100V 2.A		3 4 S	1.19 .053	.38 .043	1.10 1.13	
A0343+70	3 43.3 10.31	70 18.1	136.97 -12.27	12.2 -1.7	.SX...5..	5	P048N 2.6			1.64 .139	.30 .038	1.57 1.66	
N1449	3 43.55 5.02	-4 17.7 18.4	191.90 -42.47	305.3 -42.2	.L.....	-2	W100V 2.7		3	1.64 .069	.30 .056	1.57 1.04	
N1451	3 43.62 5.02	-4 13.6 18.3	191.84 -42.42	305.4 -42.2	.L...S..	-25	W100V 2.2		3	.86 .316	.34 .141	.78 .83	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _N m _c (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _N N _N N ₊ (24)	α ₊ α ₊ (25)	Log S _N N _N A ₂₁ (26)	RI HI (27)	V N _N N ₀ m.e. (28)	V ₀ ΔV (29)	
N1380	11.4	11.1	11.3	.21	*	*	1.07	0.43						1809	1664	
N1376	11.21	.13	13.4	10.70			.05	.06						0 2 48	-145	
12.9				.33										4169*	4128	
12.79			14.1									.76		1 1 10	-41	
N1381	12.6			.21								1 .01		1776	1630	
12.72			13.5											0 1 92	-146	
11970				.22										1074	904	
N1380A				.21										0 1 104	-170	
														1616	1471	
														0 1 146	-145	
N1386	12.4			.21										794	645	
12.30			13.9											0 1 73	-149	
N1387	12.1			.21										1239	1092	
11.95			13.6											0 1 66	-147	
N1380B				.21										1925	1779	
N1389	12.8			.21										0 1 146	-146	
12.66			13.8											1076	928	
N1385	11.8	11.65	12.1	.24	0.49	-.20	0.50	-.18	.39	1.48*	.115	1.18	1.655	0 1 117	-148	
11.82	.08	13.4	11.26	.04	.04	.04	.04	.04	-.27	1 1 3	1.45	1 .01	2.36	1502*	1389	
														1 1 13	-113	
N1395	11.2	*		.24	*									1691	1583	T PT
11.12			13.4	.26										0 2 35	-108	
N1393																
N1399	10.9	10.85	11.2	.21	0.95	0.50	0.98	0.54	.89	2.40	.80		-.02	1443*	-92	
10.82	.08	13.3	10.62	.04	.06	.02	.05	.46	.87	9 5 6	.80			0 4 59	1295	
11.3	10.6		.23	0.95	*									1419	-148	
10.66	.13	14.3	10.28	.05										0 1 55	1299	
N1394			.26												-120	
															-92	
N1404	11.5	11.20	10.2	.21	0.95	0.55	0.97	0.57	.88					1908	1759	
11.52	.08	13.1	10.96	.03	.03	.03	.04	.51						0 2 65	-149	
12.0			.22											1070	898	
11.77			13.7											0 2 72	-172	
N1401				.25										1569	1461	
N1400	12.5	12.08	11.6	.26	0.97	0.56	1.00	0.60	.90					0 1 104	-108	
12.45	.06	13.2	11.80	.02	.04	.03	.03	.50						483	389	
12.7			.22											0 1 40	-94	
12.59			13.9											881	745	
														0 1 73	-136	
N1427A				.21												-150
10343				.26												
N1407	11.5	10.8	11.8	.26	0.97		1.02		.89	1.34*	.195		2.745	1811	-94	
11.49	.2	12.7	10.51	.05	.05	*	.03			1 1 1	.705			0 1 50	1717	
N1409			.35												-94	
32 55	*															
N1410			.35	*	*									7461	7431	
32 55														0 1 105	-30	
N1415	12.8			.25										1508	1399	
12.40			14.4											0 1 50	-109	
N1416				.25												-109
N1422				.25												
N1417	12.9	12.75	13.0	.34	0.72	0.15	0.82	0.26	.58	1.68*	1.07		.165	4101	-106	
12.65	.13	14.4	12.24	.05	.05	.04	.04	.05		5 3 1	.535			4057	-44	
10346			.27											0 1 50	-94	
N1418				.34												
N1421	12.0	11.95	13.4	.29	0.51	-.02	0.63	0.06	.33	1.045	.535		2.795	2145	-44	
12.16	.08	13.2	11.21	.04	.04	.03	.03	-.15		1 0 1	.535			2067	-78	
12.1			.22											0 1 32	1494	
11.60			14.3											1628	-134	P
12.4			.21											0 1 73	1416	
12.05			13.9											0 1 66	-151	
N1433	11.4	10.685	13.2	.23	0.69	0.23	0.72	0.29	.62					984	802	
10.65	.09	14.6	10.40	.04	.05	.05	.05	.18						0 1 32	-182	
N1428				.21										228	78	
A0340+39				.89										0 1 146	-150	
N1426	12.8	12.31	12.3	.25	0.87	0.39	0.88	0.43	.80					4957	5077	
12.61	.07	13.6	12.04	.03	.06	.03	.06	.34						0 1 120	120	
N1424			.34											1358	1249	
N1437	12.9			.22										0 1 50	-109	-45
12.58			14.4											1231	1078	
														0 1 104	-153	
10342		9.125	15.4	1.25	*	*	*	*		2.40	1.68	3.21	2.755	32	228	
	.07	15.2	7.86	.25	*					4 5 2	1.04	2 .01	.685	2 3 6	196	
N1439	12.9													1997	1887	
12.49	*		14.3											0 1 100	-110	
N1440	13.0			.27												
12.74			14.2													
N1448	11.8	11.305		.23	*	*								1182	1005	
11.35	.14	14.1	10.54	.27										0 2 35	-177	P
N1452	13.0															
13.07			14.0												-99	
N1438				.25												
N1441		13.9		.34	.97				.80					4262	-114	
A0343+70		.15	13.7	13.22	.06									0 1 150	4217	
			1.07												-45	
N1449	14.4			.34	.88				.74	1 0 0				4176	200	
14.4	.15	14.0	13.92	.06										0 1 100	4131	
N1451		.15	12.7	13.87	.06				.92					3927	-45	
														0 1 75	3882	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log Do (12)	Log Ae m.e. (13)
N1453	3 43.95 5.02	-4 7.6 18.3	191.79 -42.29	305.5 -42.2	.E.2+.. E 2	-5	W100V 3.3	F3 K	3	1.33 .129	.12 .063	1.30 1.35	0.85 .05
N1461	3 46.17 4.61	-16 32.7 18.1	207.64 -47.75	288.8 -45.3	.LAR0.. S 0	-2	W100V 3.4	DS *K	4	1.52 .060	.46 .045	1.41 1.45	*
A0350+72	3 50.3 11.33	72 46 17.1	135.59 14.75	14.5 3.3	.S...7*P S 3	7*	P048C 1.9			1.41 .050	.51 .050	1.29 1.35	
N1483	3 51.2 3.10	-47 38 17.5	255.38 -49.37	246.1 -46.9	.S...4.. E.1...	4	B...V S030V						
I2006	3 52.2 3.78	-36 8 17.4	237.55 -50.47	260.8 -45.0		-5	2.0			1.36 .158	.04 .079	1.35 1.38	
N1482	3 52.45 4.44	-20 38.9 17.3	214.13 -47.80	283.0 -47.0	.SA.0.. LA....	0	P048C 1.8			1.19 .061	.13 .058	1.16 1.19	
N2573	3 54.9 -189.76	-89 52 30.0	302.90 -27.49	206.8 -15.7	.LA.... P....	-2	S030V 2.5	4VS		1.57 .183	.40 .085	1.48 1.56	
N1487	3 54.1 3.42	-42 31 17.2	247.47 -49.76	252.2 -43.4	.P.... LA...*		W100V 3.3		3	1.31 .069	.16 .037	1.27 1.28	
N1469	3 55.46 10.05	68 26.2 16.6	138.84 11.76	11.9 -1.1	.LA...*	-3	P048C 1.9			1.37 .042	.41 .045	1.27 1.43	
N1493	3 55.9 3.16	-46 21 16.9	253.20 -48.86	247.2 -42.2	.SBR6.. E.1.S.	6	S030V 2.6		4	1.42 .129	.05 .085	1.41 1.43	
A0356+10	3 56.17 5.51	10 17.5 16.8	179.85 -31.05	324.6 -39.2	.E.1.S.	-5S	P048C						*
N1494	3 56.2 2.96	-49 3 16.9	257.18 -48.24	244.0 -41.0	.SAS7.. SA.2*	7	S030V 2.4		1	1.41 .129	.16 .085	1.37 1.39	
N1511	3 59.3 4.69	-67 46 16.7	281.38 -40.74	224.4 -31.0	.SA.2*	2*	S030V 2.4		1	1.52 .082	.44 .051	1.42 1.46	
N1485	3 59.70 10.80	70 51.7 16.0	137.45 13.81	13.7 1.4	.SA.3S/ S...S.	3	P048C 1.9			1.38 .039	.53 .038	1.37	
N1511A	4 0.1 .44	-67 56 16.6	281.52 -40.59	224.2 -30.9			S030V						
N1511B	4 0.7 .48	-67 45 16.5	281.27 -40.63	224.3 -31.1	.S...*/		S030V						
N1510	4 1.9 3.32	-43 33 16.2	248.78 -48.22	250.1 -44.3	CE.0+*P	-6	S030V 1.2		4	.98 .059	.04 .031	.97 1.01	0.5 .09
N1507	4 1.93 5.08	-2 19.5 16.1	193.07 -37.56	309.9 -45.9	.SBS9PS S	9*	W100V 3.3	I *A		1.53 .031	.53 .025	1.41 1.43	1.10 .05
N1515A	4 2.5 2.48	-54 14 16.2	264.12 -45.90	237.4 -39.3	.SBR3S. SA52P.	3	R074V 2.6		4 S	1.04 .129	.04 .082	1.03 1.06	
I0356	4 2.57 10.47	69 40.7 15.6	138.47 13.11	13.2 .4		2	P200C 4.4			1.72 .035	.11 .027	1.69 1.79	*
N1512	4 2.3 3.32	-43 29 16.1	248.67 -48.16	250.2 -44.4	.SBR1.. SKS4..	1	S030V 2.4		4	1.60 .053	.10 .028	1.58 1.61	1.16 .03
N1515	4 2.85 2.47	-54 14.0 16.1	264.10 -45.85	237.4 -39.3		4	P074V 3.4			1.73 .038	.60 .028	1.59 1.61	1.10 .04
N1518	4 4.63 4.60	-21 18.7 15.8	216.34 -45.31	282.0 -49.9	.SBS8.. S 5P	8	W100V 3.4	I A		1.48 .047	.34 .036	1.40 1.42	1.00 .05
N1519	4 5.8 4.55	-17 20 15.6	211.22 -43.70	288.2 -50.0	.S...6*. L...S.	6*	P048C 1.6	I P*A *		1.38 .039	.56 .038	1.12 1.19	
I2033	4 6.1 2.49	-53 48 15.7	263.31 -45.52	237.5 -40.0		-2S	S030V						
N1521	4 6.13 4.40	-21 11.1 15.6	216.32 -44.94	282.2 -50.2	.E.3*. E 3	-5*	W100V 3.6		3	1.46 .073	.17 .085	1.42 1.46	1.05 .09
N1527	4 6.9 2.99	-48 11 15.6	255.14 -46.72	244.1 -43.1	.LA...*	-3	S030V 2.4	ED K		1.53 .129	.40 .062	1.46 1.48	
I2035	4 7.6 3.16	-45 38 15.5	251.67 -46.96	246.9 -44.3	.L...*	-2*	S030V		4				
I2038	4 7.80 2.24	-56 7.5 15.5	266.35 -44.60	234.9 -38.9	.S...*		S030V						
N1533	4 8.77 2.22	-56 15.0 15.4	266.46 -44.43	234.7 -38.9	.LB...*	-3	S030V 2.6		4	1.46 .088	.06 .043	1.45 1.49	0.91 .04
N1536	4 9.95 2.18	-56 36.9 15.2	266.87 -44.17	234.2 -38.8	.SBS5*. E 6 T	5*	S030V 2.3		1	1.30 .053	.07 .045	1.28 1.30	
N1531	4 10.07 3.88	-32 58.7 15.1	233.14 -46.60	263.9 -49.4	.E.6.PS E 6 T	-5*	P048C 1.6		3VS	1.11 .073	.19 .079	1.07 1.11	
N1532	4 10.17 1.88	-33 0.1 15.1	233.18 -45.58	263.9 -49.4	.SBS2S/ S 3	2	P048C 3.4			1.75 .051	.49 .042	1.63 1.65	
A0410+29	4 10.8 6.26	29 2 14.9	167.46 -15.72	345.5 -30.6	.SB...S. L...S.	4*	P048N 1.7			1.18 .039	.26 .038	1.12 1.20	
N1537	4 11.73 3.93	-31 46.2 14.9	231.47 -46.10	265.6 -50.1		-3S	W100V						
N1543	4 11.78 2.02	-57 52.0 15.0	268.41 -43.54	232.7 -38.3	RLBS0.. L...*	-2	S030V 2.7		4	1.59 .050	.26 .041	1.53 1.57	1.00 .03
N1546	4 13.53 2.20	-56 11.1 14.8	266.10 -43.82	234.2 -39.5		-2*	S030V 2.5		3VS	1.50 .120	.31 .060	1.43 1.47	0.90 .04
N1549	4 14.65 2.24	-55 42.9 14.6	265.41 -43.80	234.6 -39.9	.E.0+.. LAR0..	-5	S030V 2.8		4	1.57 .085	.06 .043	1.56 1.60	1.03 .04
N1553	4 15.08 2.22	-55 54.2 14.6	265.64 -43.69	234.3 -39.8		-2	B060V 3.4		5	1.61 .069	.17 .034	1.57 1.61	1.00 .03
I2056	4 15.65 1.67	-60 20.0 14.5	271.37 -42.26	229.9 -37.1	RLB...P	-3*	S030V 2.3		3	1.29 .158	.06 .082	1.28 1.32	
I2058	4 16.83 2.19	-56 3.3 14.3	265.75 -43.41	234.0 -39.9	.S...7S/ SBS6..	7S	B060V 2.5			1.50 .088	.84 .055	1.30 1.32	
N1559	4 17.02 1.26	-62 54.3 14.4	274.52 -41.19	227.3 -35.5		6	S030V 2.6		2	1.52 .049	.20 .040	1.47 1.50	
N1530	4 17.05 12.86	75 10.7 13.6	135.23 17.76	17.5 4.0	.SBS73.. S...S.	3	W060V 3.5		1	1.69 .035	.23 .032	1.64 1.71	
N1558	4 17.7 3.14	-45 9 14.2	250.70 -45.25	246.3 -44.1			....V		4VS				
N1566	4 18.88 2.29	-55 3.4 14.1	264.32 -43.39	234.8 -40.8	.SKS4.. LAS...*	4	S030V 3.4		4 S	1.88 .032	.09 .022	1.86 1.89	1.35 .05
N1574	4 20.98 2.05	-57 5.4 13.8	266.90 -42.58	232.5 -39.7		-3	S030V 2.4		4	1.31 .129	.02 .067	1.31 1.35	0.90 .07
A0422-00	4 22.0 5.13	-0 52 13.5	194.91 -32.55	314.7 -50.0									
A0423+70	4 23.2 10.88	70 15 12.9	139.33 14.77	14.9 -3	.SKS4.. P048N	4	1.9			1.36 .039	.40 .038	1.27 1.35	
A0423+69	4 23.4 12.65	69 29 12.9	139.93 14.26	14.5 -9						.66 .050	.11 .050	.64	
N1569	4 26.09 9.52	64 44.4 12.6	143.69 11.24	11.9 -4.9	.IB.9.. I P	10 6*	P200V 4.0	I A		1.46 .029	.29 .020	1.39 1.44	0.84 .03

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _g m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _g (U-B) _T (23)	Log S _R N _L N ₀ N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	ΔV ΔV ₀ (29)	
N1453	12.8	12.60	12.3	.34	1.03	0.62	1.05	0.66	.92						3906	3861
N1461	12.59	.08	13.9	12.20	.03	.06	.03	.04	.56						0 3 22	-45
A0350+72	12.8	12.75		.28	1.05	0.57	*	*								-93
	12.55	.09	14.1	.88	.04	.04										
N1483				.24											999	203
I2006	12.8			.22											0 1 73	810
	12.46		14.1												1391	-189
N1482				.26											0 1 73	1230
N2573				.56												-161
															1655	1542
N1487	12.6	12.315		.23	*	*									0 1 104	-113
V 78	12.49	.13	13.3	11.92												
N1469				1.10											716	537
N1493	11.8			.24											0 1 73	-179
	11.82		13.6													
															1023	193
A0356+10		16.10		.46	1.20	0.61	*	*		3.00	.77				0 1 104	835
		.05			.02	.06				10 4 7	.69				-188	
N1494	12.2			.25											9190	9190
N1511	12.19		13.7												0 1 120	0
N1485	12.1			.35											1100	906
N1511A	12.20		13.5	.93											0 1 146	-194
				.35											1827	1605
N1511B															0 1 100	-222
N1510		13.485	11.5	.23	0.48	-.28	0.45	-.20	.42							196
N1507	12.9	.06	13.3	13.24	.03	.03	.04	.06	-.31							-223
N1515A	12.73	.1	13.9	11.84	0.51	-.20	0.55	-.09	.30						968	782
				.27	.04	.05	.03	.04	-.35						0 2 70	-186
I0356		11.435		.98	*	*	*	*							903	850
		.07	14.6	10.35											0 1 27	-53
N1512	11.8	11.465	12.7	.23	0.84	0.22	0.89	0.25	.76							
N1515	11.50	.08	14.1	11.14	.02	.04	.02	.03	.16						822	1015
N1518	12.1	11.83	12.8	.27	0.80	0.19	0.91	0.28	.62						2 .01	193
N1519	11.87	.12	13.8	11.07	.05	.05	.04	.04	.04							
	12.1	12.30	12.8	.27	0.46	-.25	0.42	-.22	.33						744	558
N1519	12.09	.05	13.7	11.76	.02	.02	.02	.02	-.35						0 1 50	-186
I2033				.27											1091	884
															0 1 15	-207
N1521	13.0	12.4	13.1	.27	0.96	0.46	0.97	0.51	.86						935	810
N1527	12.44	.13	14.3	12.07	.05	.06	.04	.04	.42						1 1 10	-125
I2035	12.1		13.4	.25												
I2038	11.91			.24											1038	840
	12.6			.28											0 1 100	-198
N1533	12.3	11.88	11.9	.28	0.96	0.52	0.98	0.57	.89							-194
	11.91	.09	13.9	11.58	.03	.03	.02	.03	.46							
N1536	13.2	13.1		.29											773	560
N1531	13.09	.3	14.3	12.77											0 1 21	-213
N1532	13.0	12.8		.23	.70	.15			.63							
	13.24	.15	12.9	12.55	.06	.07			.12						1592	1378
N1532	11.8	*		.23	*	*				1.30*	1.74				0 1 100	-214
A0410+29	11.53		13.9	.84						0 1 2	1.54	1 .05			1253	1089
52372															0 1 180	-164
N1537	12.0	*	.23	*	*	*									1184*	1019
															1 1 49	-165
N1543	12.0	11.57	12.1	.29	0.97	0.47	0.99	0.52	.87						5342	5404
N1546	11.71	.08	13.7	11.15	.05	.06	.02	.03	.39						0 1 105	-62
N1549	12.5	12.50	12.5	.29	0.93	0.25	0.94	0.30	.82						1299	1137
N1553	12.28	.08	14.1	12.07	.03	.03	.03	.03	.16						0 1 104	-162
N1559	11.0	10.87	11.5	.28	0.93	0.45	0.94	0.50	.86							
	10.79	.09	13.6	10.57	.03	.03	.02	.02	.39							
N1559	10.2	10.47	11.0	.29	0.94	0.48	0.96	0.52	.85	1.30\$	1.43\$				0 2 16	-215
I2056	10.40	.08	13.0	10.09	.03	.04	.02	.02	.41	1 0 2	1.43\$				1064	1064
	12.3			.31											0 2 18	-216
I2058	12.30		13.5												1089	868
				.29											0 1 30	-221
N1559	11.1	10.86		.33	.41	-.08			.29							
N1530	11.28	.14	12.8	10.36	.06	.07			-.17	1.66*	.35\$				1250	1025
72112				.72						1 1 3	.85*				0 2 64	-225
N1558				.24												201
N1566	10.5	10.265	12.5	.28	0.85	0.00	0.85	0.05	.76	1.63*	.39\$					-199
	9.99	.08	14.3	9.90	.05	.05	.04	.04	-.08	1 1 3	1.16*				1394	1178
N1574	12.2	11.3	11.3	.29	0.82	0.35	0.87	0.42	.74						0 3 20	-216
A0422-00	12.14	.1	12.7	10.99	.04	.04	.04	.04	.30							
				.43											890	670
A0423+70				.85											0 1 40	-220
															4645	4580
A0423+69				.87											0 1 100	-65
72 14															3051*	3240
N1569	12.4	11.955	11.6	1.08	0.77	-.16	0.74	-.18	.46						1 1 10	189
72 16	12.25	.06	13.4	10.58	.02	.04	.02	.03	-.38	1.62	-.08\$	1.83	1.96\$		10290	10477
										1 3 2	.16\$	1 .02	1.39\$		0 1 80	187
															0 1 80	187
															2 2 8	174

NGC IC, A MK, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log Do (12)	Log Ae m.e. (13)	
N1596	4 26.53	-55 8.2	264.08	233.8	.LA..*/	-2*	B060V			1.59	.51	1.47	0.90	
N1602	4 26.80	-55 10.0	264.11	233.7	.I..9SP	10S	C060C		4	.082	.040	1.51	.05	
N1560	4 27.06	71 46.2	138.38	16.0	.SA57./	7	W060V		1	1.99	.68.	1.83		
I2082.	4 27.97	-53 56.1	262.43	234.9	.L.....	-2	C060C		1	.033	.025	1.89	0.80	
N1587	4 28.09	0 33.3	194.46	317.8	.E..1.P.	-5	P048C			1.31	.02	1.31	.06	
N1588	4 28.2	0 33	194.48	317.8	.E..1.P*	-5	P048C			.067	.059	1.38		
MK616	5.18	12.6	-30.49	-50.8						1.25	.24	1.19		
N1589	4 28.2	0 45	194.29	318.1	.S...2./	2	P048C			.042	.045	1.26		
I2075	4 28.5	-5 54	201.06	308.1	.SBT4..	4	P048C			1.49	.41	1.40		
N1590	4 28.5	7 31	187.98	327.1	.P.....		P048N			.039	.038	1.45		
N1573	4 29.0	73 9	137.39	16.9	.E..3...	-5	P048N			1.30	.10	1.28		
N1599	4 29.17	-4 41.7	199.99	310.1	.S...4*.	4*	P048C			.061	.058	1.32		
N1600	4 29.20	-5 11.5	200.42	309.3	.E..3...	-5	W100V		3	1.10	.03	1.09		
A0429+01	4 29.3	1 5	194.14	318.7	E 2		P048N	DE K		.050	.16	1.31	1.0	
N1601	4 29.37	-5 12.0	200.46	309.3	.L...*/	-2*	W100V		3	.050	.050	1.42	.09	
N1606	4 29.59	-5 8.2	200.42	309.5	.LXR+..	-1	W100V			1.04	.05	1.03		
I2085	4 30.28	-54 31.4	263.12	234.0	.SX52*/	2	C060C			.057	.054	1.07		
A0430+05	4 30.53	5 15.0	190.38	324.6	.L...*	-2*	P048N			1.39	.13	1.36	1.05	
N1617	4 30.55	-54 12.5	263.35	233.7	.SBS1..	1	S030V			.13	.142	1.03		
N1614	4 31.60	-8 40.9	204.46	303.9	.SBS5P.	5	P200V		3	.039	.038	1.35	*	
MK617	4 32.7	-1 50	197.53	315.0						1.01	.14	.98		
A0432+01	5.09	12.0	-30.79	-52.8					5	.073	.088	1.03		
N1615	4 33.09	19 51.0	178.14	341.5	.LA..-*	-3	P048C							
N1618	4 33.60	-3 15.1	199.08	313.0	.SBR3*.	3*	W100V			1.20	.23	1.15		
A0434+10	4 34.0	-10 28	206.72	301.1						.051	.058	1.26		
MK618	4 34.7	11.9	-34.66	-55.9						1.44	.36	1.36	.95	
N1620	4 34.06	-0 14.7	196.16	317.7	.SAT4*.	4	P048C			.053	.043	1.40	.05	
N1622	4 34.10	-3 17.4	199.20	313.0	.SXR2*.	2*	W100V			1.12	.10	1.10		
N1625	4 34.59	-3 24.2	199.38	312.9	.SBT3*.	3*	W100V			.075	.100	1.00		
A0435+11	4 35.9	11 9	185.93	333.0	S N -					1.48	.39	1.39		
N1635	4 37.58	-0 38.6	22.89	-46.8	.RSXR0..	0	P048C			.036	.032	1.43		
I0381	4 37.87	75 32.8	135.83	18.8	.SXT4..	4	P048C			1.59	.55	1.46	1.05	
A0437+04	4 37.92	4 6.0	192.61	324.6	.LX....	-1	P048N			.050	.040	1.51	.04	
N1637	4 38.96	-2 57.1	199.57	314.4	.SXT5..	5	P200V	S F	4	1.43	.55	1.30	1.05	
N1638	4 39.08	-1 54.2	198.54	316.0	S S N	-2*	P048C	S F	4VS	.049	.038	1.34		
I0387	4 39.3	-7 11	203.93	307.4	F 2		P048C							
N1640	4 40.07	-20 31.8	218.88	282.9	.SBR3..	3	P200V		3	.065	.060	1.43	.07	
N1642	4 40.34	0 31.5	196.36	320.0	.SAT5*.	5	P048C	B G	3 S	.07	.058	1.18		
A0441+74	4 41.48	74 50.1	136.58	18.6	.IB.9..	10	P048F			.051	.058	1.18		
D 33	4 43.3	-2 11	199.43	316.4	.S.....									
N1654	4 43.3	-2 30	199.74	315.9	.E..0...	-5	P048N			1.24	.05	1.23		
N1653	4 43.3	-2 30	199.74	315.9	.E..0...	-5	P048N			.037	.034	1.29		
N1659	4 44.03	-4 52.7	202.22	312.1	.SAR4P.	4	W100V			1.44	.22	1.40		
N1672	4 44.92	-59 20.2	268.79	227.5	S 5 K	5	S030V	SD *F	3VS	.039	.038	1.46		
A0446+00	4 46.00	0 9.2	197.55	320.6	.I..9*.	10*	P048N			1.13	.07	1.11		
D 34	4 46.11	-6 39.4	204.31	309.3	.LBR+..	-1	W060V			.051	.058	1.18		
N1666	4 46.17	-6 24.4	204.06	309.8	.SXR5..	5	W060V		4	1.02	.09	1.07		
N1667	4 46.17	-6 24.4	204.06	309.8	.SXR5..	5	W060V			1.02	.09	1.07		
A0447+03	4 47.2	3 15	194.80	325.4	.L...P*	-2*	P200C	S AF	3VS	.066	.046	1.21	0.80	
A0447-29	4 47.22	-29 17.9	230.09	265.9	.S...9*.	9*	P048N			.054	.046	1.21	.04	
D228	4 47.22	-29 17.9	230.09	265.9	S	9	2.5			1.07	.08	1.05		
N1688	4 47.68	-59 53.3	269.39	226.7	.SBS5..	5	S030V		4	.050	.050	1.13		
A0449-17	4 49.08	-17 35.2	216.41	288.5						1.49	.07	1.48		
I0391	4 49.72	78 6.7	134.05	20.7	.SASS..	5	L036V			.071	.071	1.50		
A0450-25	4 50.82	-25 19.8	225.54	273.0	.SXS9..	9	P048N							
D229	4 51.10	-59 49.4	269.18	226.2	SX	8	S030V			1.24	.01	1.24		
N1703	4 52.10	-59 49.4	269.18	226.2	.SBR3..	3	S030V		3 S	.046	.045	1.29		
	1.51	9.6	-38.00	-40.7						1.58	.01	1.57		
										.046	.045	1.59		
										1.50	.04	1.49		
										.183	.129	1.52		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂ (26)	RI HI (27)	V N ₀ m.e. (28)	V ₀ ΔV (29)	
N1596	12.3	11.90	11.9	.29	0.93	0.38	0.95	0.42	.80					1486	1266	T
N1602	12.08	.09	13.4	11.38	.03	.03	.03	.03	.28					0 1 27	-220	
N1560		12.24		.78	.72				.42						-220	T
I2082.		.11	15.3	10.92	.07							2.21		1 0 8	151	
		13.9	13.4	.28	1.11	*	1.12	*		2.70	.80	1 .03	.07	12088	11869	P
N1587		.1		.46	.05	*	.04			3 2 3	.92			0 1 270	-219	
22 12		*			*									3890	3826	
														0 1 75	-64	
N1588				.46										3378	3314	
22 12														0 1 105	-64	
N1589				.47												
I2075				.40										4322	4233	
N1590				.55										1 1 13	-89	
22 13														3795	3758	
N1573		13.5	14.0	.74	*	*	1.16	0.04						0 1 105	-37	
72 18		.13	14.8				.05	.06							194	
N1599				.41												
N1600	12.7	12.10	12.8	.41	0.99	0.54	1.01	0.58	.85					4830	4743	
A0429+01	12.38	.04	13.7	11.62	.02	.06	.02	.03	.47					0 1 100	-87	
				.47										3499	3436	
N1601		14.7		.41	0.94	0.47	*	*	.79					1 1 14	-63	
		.1	14.3	14.16	.02	.06			.40					4997	4910	
N1606				.41										0 1 100	-87	
															-87	
I2085				.29												
A0430+05		14.3		.52	0.56	-.45	*	*	.33	2.64	.34*		-3.54	9991	-221	
22 14		.1	13.8	13.58	.05	.05			-.49	4 5 6	-.45*			0 4 21	9944	
N1617	11.7	11.21	12.3	.29	0.95	0.42	0.98	0.49	.82					1000	778	PT
	11.47	.09	13.7	10.68	.03	.05	.02	.03	.30					0 1 15	-222	
N1614		13.60	11.9	.38	0.69	0.05	0.67	-.06	.56					4755	4643	P
22 15		.06	13.9	13.15	.02	.02	.03	.03	-.04					0 2 20	-102	
A0432-01				.45										9758	9681	
22 17														0 1 105	-77	
N1615				.80												
N1618		13.35	13.6	.44	0.80	-.05	0.87	0.05							9	
		.09	14.5	.37	.04	.04	.04	.04							-83	
A0434-10				.37										10840	10730	
N1620				.47										0 1 100	-110	
N1622		13.15	13.9	.44	0.89	0.33	0.95	0.41							-72	
		.09	14.6		.05	.05	.04	.04							-84	
N1625	13.1	13.2	13.9	.44	0.80	-.04	0.86	0.05	.58					3038	2953	
	13.17	.1	13.8	12.30	.05	.05	.05	.05	-.22					0 1 48	-85	
A0435+11				.64										4393	4365	
22 18				.48										0 1 105	-28	
N1635															-76	
I0381				.67											197	
A0437+04		14.8		.54	.88				.70					4600	4542	
		.15	15.1	14.15	.06									0 1 50	-58	
N1637	11.6	11.60	13.3	.45	0.65	0.05	0.73	0.10	.53			1.66		712	626	PT
	11.50	.05	13.9	11.10	.02	.02	.02	.02	-.04			1 .01	1.31	2 2 7	-86	
N1638	13.1	12.95		.47	0.89	0.31	0.90	0.35								
	12.75	.09	14.5		.03	.03	.03	.03							-83	
I0387				.41										4546*	4443	
N1640	12.6	12.45		.30	0.73	0.14	*	*	.63					1 1 19	-103	
	12.43	.09	14.2	12.03	.04	.05			.06					1541	1392	
N1642				.50										0 1 51	-149	
															-74	
A0441+74				.67								1.08		1636	1831	
N1654				.47								1 .02		1 0 10	195	S
N1653				.47										4540	4453	
														0 1 45	-87	
N1659	12.9	13.19	13.2	.44	0.70	-.05	0.65	-.05	.55					4542	4444	
	13.09	.07	13.9	12.65	.03	.03	.03	.04	-.16					0 1 37	-98	
N1672	11.4	11.035		.32	*	*	*	*		1.65*	.34*		1.84*	1309	1076	PT
	11.04	.13	14.1	10.63						2 1 3	.92*			0 3 33	-233	
A0446+00				.51										670	590	
N1666				.43								.94		1 0 10	-80	
												1 .01				
N1667	12.9	12.75	12.2	.43	0.70	0.04	0.79	0.10	.55					4609	-106	
	13.16	.08	13.3	12.22	.04	.04	.04	.05	-.06					0 1 35	4504	
A0447+03				.56										8403	-105	
22 23														0 2 39	8334	
A0447-29				.27								.92		1472	-69	
												1 .01		1 0 10	1291	
N1688	12.7			.33										1229	995	T
	12.60		14.1	.33	.98	.55				1.90	1.32			0 1 11	-234	
A0449-17		14.6		.33	.06	.07				2 3 4	.53			9652	9505	
I0391		.15		.61	.31				.15					0 1 270	-147	
		13.0		.31	.06									1486	1687	
A0450-25		.15	14.0	12.37								1.24		0 1 116	201	
				.29								1 .01		1375	1203	
N1703				.33										1 0 10	-172	T
															-236	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D(0) Log D ₀ (12)	Log A _e m.e. (13)
N1705	4 53.12	-53 26.5	261.09	231.8	.LA.-*P	-3	S030V			1.26	.10	1.24	0.65
A0453-20	2.29	9.4	-38.74	-45.5			2.2		4	.224	.129	1.28	.07
I2104	4 53.23	-20 39.2	220.30	282.2			.87			.00	.87		
	4.35	9.3	-36.36	-61.2			.075			.100			
	4 54.2	-15 52	215.05	292.2			1.34			.10	1.32		
	4.55	9.1	-32.41	-61.5			.075			.100			
N1700	4 54.47	-4 56.5	203.71	313.8	.E.4...	-5	P200V			1.46	.15	1.42	0.95
	4.97	9.0	-27.61	-59.1	E 1 T		4.2	E4 K	4	.079	.039	1.49	.1
N1699	4 54.52	-4 50.0	203.61	314.0	.SAT3..	3	P200V			1.04	.19	1.00	
	4.98	9.0	-27.55	-59.0			3.3		3VS	.051	.041	1.05	
I0398	4 55.80	-7 51.3	206.81	308.6	.SBS55.	55	W100V			1.16	.43	1.06	
	4.86	8.9	-28.68	-60.4			2.7			.053	.945	1.10	
A0456+04	4 56.5	4 54	194.63	330.0	.SB.1..	1	P048N			1.24	.23	1.18	
	5.34	8.7	-22.19	-54.7			1.8			.039	.038	1.25	
A0456+05	4 56.6	5 33	194.05	330.9	.S..3..	3	P048N			1.25	.08	1.23	
	5.36	8.7	-21.82	-54.3			2.0			.039	.038	1.29	
N1720	4 56.93	-7 56.0	207.03	308.6	.SBS2..	2	W100V			1.25	.16	1.21	
	4.86	8.7	-28.46	-60.7			3.1		4VS	.048	.041	1.26	
N1723	4 57.0	-11 3	210.24	302.4						1.57	.22	1.53	
	4.74	8.7	-29.82	-61.5						.075	.100		
N1726	4 57.28	-7 49.7	206.97	308.8	.LAS0..	-2*	W100V			1.16	.12	1.13	
	4.86	8.6	-28.34	-60.7	E 2		3.0	E3 K	D4 S	.100	.050	1.19	
N1730	4 57.3	-15 54	215.43	292.2						1.47	.23	1.42	
	4.55	8.7	-31.73	-62.2			2.2			.075	.100		
N1744	4 57.93	-26 5.8	227.00	270.6	.SBS7..	7	W100V			1.83	.22	1.78	1.5
	4.11	8.6	-35.02	-61.3	SX5	5*	4.2			.036	.026	1.80	.1
N1771	4 58.50	-63 22.3	273.37	222.6	.S..6.*	6*	F040H						
	.90	8.8	-36.58	-38.3									
A0458+65	4 58.6	65 44	145.11	15.3									
	9.94	8.1	14.51	-5.9									
A0459+03.	4 59.0	3 30	196.27	328.6	.RING..	10R	P200V						*
	5.29	8.4	-22.40	-56.0									
N1741B	4 59.11	-4 20.1	203.73	315.8	.SBS9*/	9	P200C						
	4.99	8.4	-26.31	-59.9									
N1741A	4 59.14	-4 19.8	203.73	315.8	.SBS9P.	9	P200C						
	4.99	8.4	-26.30	-59.9									
N1741.	4 59.14	-4 19.8	203.73	315.8	.P.....	9	P200V			1.22	.27	1.16	*
	4.99	8.4	-26.30	-59.9						.061	.058	1.19	*
I0399	4 59.28	-4 22.2	203.78	315.7	.IXS9P.	10	M082C						
	4.99	8.4	-26.29	-59.9									
N1752	4 59.74	-8 18.7	207.77	308.3	.SBR5..	5	P048C			1.42	.47	1.31	
	4.84	8.3	-28.01	-61.4			1.9			.052	.048	1.35	
A0500+16	5 0.52	16 19.9	185.17	344.6	.I..9.*	10*	P048N			1.31	.00	1.31	
D 35	5.79	8.1	-15.03	-47.7			.050			.131	.050	1.36	
N1796	5 2.1	-61 12	270.62	223.8	.SBS3*	3*	S030V		1	1.31	.25	1.25	
	1.26	8.2	-36.56	-40.3			2.1		1	.091	.058	1.28	
N1779	5 2.91	-9 12.7	209.07	306.9	.SBR05.	0	P048C			1.41	.25	1.35	
	4.81	7.9	-27.71	-62.5			2.1			.038	.036	1.40	
A0503+70	5 3.1	70 26	141.33	17.9	.SX55..	5	P048N			1.23	.00	1.23	
	11.26	7.4	17.52	-1.9			2.0			.039	.038	1.29	
N1784	5 3.11	-11 56.4	211.89	301.2	.SBR5..	5	P200V			1.62	.17	1.58	1.10
	4.70	7.8	-28.84	-63.1	SX5	3*	4.5	SB FG	3VS	.043	.030	1.61	.04
N1792	5 3.50	-38 2.7	241.70	248.5	.SAT4..	4	W100V	SI *AF		1.60	.28	1.53	1.10
	3.47	7.9	-36.46	-57.1			3.7		3VS	.077	.049	1.55	.05
A0504-17	5 4.4	-17 38	218.06	288.5	.SXR5..	5	P048C			1.29	.20	1.25	
	4.47	7.7	-30.82	-64.0			2.0			.061	.058	1.28	
N1800.	5 4.54	-32 1.1	234.45	258.2	.LX..P*	-1	P074C			1.20	.24	1.14	0.73
	3.81	7.7	-35.12	-60.5	E 6 P5		2.7			.075	.100	1.18	.05
N1796A	5 4.6	-61 15	270.62	223.4	.S...*		S030V						
	1.24	7.9	-36.25	-40.5									
A0505-16	5 5.52	-16 21.7	216.81	291.4	.SB.9..	9	P048F			1.37	.22	1.32	
D 36	5.52	7.5	-30.09	-64.2	SB	8	2.1			.061	.058	1.34	
N1808	5 5.98	-37 34.7	241.22	248.7	RSXS1..	1	W100V	S P F	2S	1.86	.25	1.80	1.35
	3.49	7.5	-35.90	-57.8			4.3		4	.060	.038	1.83	.04
N1796B	5 7.3	-61 31	270.89	222.9									
	1.18	7.5	-35.89	-40.4									
A0507-00	5 7.7	-0 47	201.46	324.1									
	5.13	7.2	-22.71	-60.1									
A0508-02	5 8.3	-2 45	203.40	320.7	.P.....		P048N			.89	.13	.86	
	5.05	7.1	-23.53	-61.2			1.2			.050	.050	.91	
A0508+84	5 8.5	84 26	128.57	24.2	.SB.1..	1	P048N			1.23	.29	1.16	
	27.79	5.4	24.93	10.6			1.7			.039	.038	1.22	
A0508-31	5 8.8	-31 40	234.28	258.0	.S..9.*	9*	P048F			1.45	.08	1.43	
D230	3.82	7.1	-34.16	-61.4	S	8*	2.4			.046	.045	1.45	
A0509-14	5 9.42	-14 51.0	215.64	295.1	.SXT5..	5	P048C			1.45	.08	1.43	
	4.58	7.0	-28.63	-65.1	N.		2.4			.039	.038	1.46	
N1832	5 9.80	-15 44.8	216.62	292.9	.SBR4..	4	P200V		4	1.44	.16	1.40	
	4.54	6.9	-28.90	-65.2	S 5	3	4.1	S F	4 S	.045	.034	1.43	0.95
A0510-33	5 10.1	-33 2	235.97	255.2	.I..9..	10	P048N			1.53	.13	1.50	.03
D231	3.75	6.9	-34.21	-61.0	I	9	2.2			.071	.071	1.51	*
A0513+06	5 13.93	6 23.1	195.72	336.9									
	5.40	6.3	-17.72	-57.1									
A0515+00	5 15.2	0 10	201.56	327.8									
	5.16	6.1	-20.61	-61.2									
A0516-21	5 16.90	-21 35.8	223.56	278.4	.I..9..	10	P048N			1.18	.17	1.14	
D 37	4.29	5.9	-29.49	-66.6		95	1.8			.052	.050	1.16	
N1879	5 17.9	-32 12	235.46	254.9	.I..9..	10	P048N			1.35	.06	1.34	
D232	3.78	5.8	-32.42	-62.8	SX	9	2.2			.046	.045	1.35	
A0518-45	5 18.40	-45 49.7	251.60	235.0									
	2.91	5.8	-34.63	-53.9									
N1875.	5 19.1	6 38	196.20	338.9	.LA.-*.	-3*	P200C						
	5.41	5.5	-16.50	-57.9									
N1888	5 20.24	-11 32.8	213.48	304.2	.SBS5P.	5	W060V			1.47	.50	1.35	0.92
	4.71	5.4	-24.87	-67.2			2.8			.045	.040	1.39	.03
N1889	5 20.25	-11 32.6	213.47	304.2	.E.0...	-5	W060V			.90	.03	.89	
	4.71	5.4	-24.87	-67.2			2.1			.183	.095	.96	
A0521+76	5 21.0	76 37	136.37	21.5	.SXR4..	4	P048N			1.21	.03	1.21	
	14.41	4.6	21.76	3.3			2.0			.039	.038	1.26	
A0524-69	5 24.0	-69 48	280.47	215.8	.SBS9..	9	...V			3.81	.07	3.79	
	-78	5.3	-32.89	-34.1			5.0			.049	.015	3.81	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _{1/2} m.e. (21)	(U-B) _{1/2} m.e. (22)	(B-V) _{1/2} (U-B) _{1/2} (23)	Log S _R N _N N _N (24)	α ₁ α ₁ (25)	Log S _H N _N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N1705	12.9*	12.80	11.5	.30	0.50	-.40	0.25	-.60	.42					629	398	T
A0453-20	12.51	.09	13.7	12.47	.05	.05	.05	.05	-.45	2.68	.58			0 3 11	-231	
I2104				.32						4 2 2	.77			10602	10442	
				.35										0 2 35	-160	
N1700	12.4	11.9	12.1	.47	0.95	0.49	0.96	0.53	.81					3976	3870	
N1699	12.05	.1	13.8	11.37	.02	.03	.02	.03	.41					0 1 40	-106	
				.47											-106	
I0398				.44												
A0456+04				.64											-118	
A0456+05				.65										4694	-70	
N1720				.44										1 1 10	4627	
N1723				.41											-67	
															-119	
N1726	13.0	13.1		.44	.99	.52									-131	
N1730	13.24	.15	13.5	.36	.06	.07									-119	
N1744	12.5*	11.7	14.7	.29	0.49	*	0.53	-.14	.38			2.01		758	-147	
N1771	11.44	.13	15.1	11.23	.05		.04	.05				1.01	.31	1 1 10	579	
				.36											-179	
A0458+65				.81											-240	
72 23														9965	10131	
														0 1 210	166	
A0459+03.		15.58		.62	0.46	-.39	*	*						8649	8572	
22 28		.09		.49	.03	.04								0 1 105	-77	
N1741B				.49										4041	3933	P
N1741A				.49										0 1 37	-108	
														3942	3834	P
N1741.		13.80		.49	0.42	-.52	*	*	.22			1.04*		0 1 10	-108	
I0399		14.90	14.1	13.06	.03	.04			-.66			1.01	.915	4057	3949	
		.09		.49	0.45	-.35	*	*						1 0 25	-108	
					.05	.1								4020	3912	
N1752				.44										0 1 20	-108	
A0500+16				.99								1.03			-123	
N1796	12.9			.35								1.01		1391	1365	
N1779	13.05		13.8											1 0 15	-26	
				.44										1017	777	
A0503+70				.69										0 1 100	-240	
															-129	
N1784	12.8	12.45	13.4	.41	0.70	*	0.95	0.36	.56			1.30		2320	2182	PT
N1792	12.19	.13	15.0	11.89	.05		.03	.03				1.01	1.42	2 2 10	-138	
A0504-17	10.7	10.85	11.8	.27	0.67	0.04	0.71	0.09	.55	1.40*	.695	*	2.765	1189	977	P
	10.97	.07	13.0	10.35	.03	.03	.04	.04	-.05	2 1 3	.70			0 2 22	-212	
				.36										4499	4341	
N1800.	12.9	13.10	12.2	.28	0.55	-.15	0.35	-.21						1 1 16	-158	
N1796A	13.20	.08	13.4	.35	.04	.04	.04	.04							-199	
															-241	
A0505-16				.37								.92		2045	1890	
N1808	11.2	10.70	12.9	.27	0.81	0.30	0.92	0.30	.69	1.80	.655	1.01	1.88	1 0 71	-155	
N1796B	10.66	.08	14.2	10.22	.02	.03	.02	.02	.21	2 4 6	.84	1.01	2.64	1 3 14	-212	P
				.36											-243	
A0507-00				.59										8115	8014	
22 32														0 1 185	-101	
A0508-02				.55										2867	2758	
22 33														0 2 40	-109	
A0508+84				.53												
A0508-31				.28								1.18		981	212	
A0509-14				.39								1.01		1 0 10	-201	
N1832	13.1	12.69	14.6	.38	0.75	0.12	0.81	0.20	.62	1.48*		1.32	1.335	1916	1760	PT
A0510-33	12.6	.1	13.7	11.58	.04	.05	.03	.03	.02	0 1 1	.655	1.01	1.69	1 2 12	-156	
	12.47			.28	0.60		*	*	.50			1.57		936	731	
		13.20	15.4	12.79	.05							1.01	-.15	1 0 10	-205	
A0513+06				.80										8104	8027	
A0515+00				.65										0 1 120	-77	
22 36														8960	8857	
A0516-21				.35								.61		0 1 185	-103	
												1.01		1812	1633	
N1879				.29								1.01		1 0 70	-179	
												.84		1248	1040	
A0518+45		*		.30	*	*				4.12	.51	1.01		1 0 10	-208	
										4 2 4	1.43			10510	10276	
														0 1 120	-234	
N1875.				.86										*		
V169		12.90	13.0	.46	0.93	0.30	1.00	0.42	.72					2503	2353	P
N1888		.05	13.8	12.03	.02	.02	.02	.02	.10					0 1 61	-150	P
N1889		*		.46	*	*								2472	2322	
A0521+76				.58										0 3 10	-150	P
														4174	4366	
A0524-69	0.5*	0.635	14.4	.43	0.55				.43	4.79	.45*	5.61	4.48	1 1 13	192	
	0.76	.06		.14	.03					2 1 0		3.01	2.40	2 2 5	13	PT
														-247		

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D) Log D ₀ (13)	Log A _e m.e. (14)
A0526-16	5 25.9	-16 8	218.72	292.4	.SBS6..	6	P048C			1.26	.00	1.26	
N1947	4.52	4.6	-25.49	-69.1			2.1			.061	.058	1.29	
A0527+73	5 26.47	-63 48.1	273.33	218.9	.L...P.	-3	S074V			1.47	.06	1.46	1.00
D 38	4.70	4.8	-33.44	-39.6			3.4			.039	.024	1.51	.04
N1954	5 27.27	73 41.2	139.36	20.9	.I...9..	10	P048N		D3	1.36	.00	1.36	
	12.70	3.8	20.77	4	I	9	2.3			.071	.071	1.39	
	5 30.52	-14 5.8	217.16	298.5	.SATS..	5	P048C			1.61	.24	1.55	
	4.60	3.9	-23.65	-70.1			2.6			.051	.042	1.59	
N1964	5 31.24	-21 58.9	225.28	275.4	.SXS3..	3	P200V		4	1.79	.39	1.70	0.95
	4.27	3.9	-26.50	-69.7	S 3	3	4.6	S G	4 S	.035	.023	1.74	.04
N1961	5 36.56	69 21.3	143.83	20.1	.SXT5..	5	W060V	S *F	4*	1.63	.16	1.60	1.30
	11.03	2.6	19.47	-3.9	S 3PNT	1*	3.5		3VS	.032	.025	1.65	.05
N2082	5 41.59	-64 19.2	273.82	216.7	.SBR3..	3	B060V		2 S	1.21	.01	1.21	
	.56	2.6	-31.75	-39.8			2.8			.077	.048	1.25	
N2090	5 45.2	-34 15	239.44	242.9	.SATS..	5	W100V		D3 S	1.65	.28	1.58	
	3.65	1.9	-27.43	-66.0			3.8			.049	.031	1.61	
A0548-31	5 48.96	-31 45.0	237.02	245.9									
	3.18	1.3	-25.96	-68.3									
A0549+75	5 49.88	75 18.3	138.44	22.8	.I...9..	10	P048F			1.67	.09	1.65	
D 39	13.61	.5	22.81	1.5		9	2.8			.050	.050	1.68	
A0551+78	5 51.0	78 30	135.20	23.7	.SX.5..	5	P048N			1.22	.15	1.19	
	16.05	.1	23.99	4.5			1.9			.039	.038	1.24	
A0553+68	5 53.0	68 26	145.38	21.3	.PSX.3..	3	P048N			1.30	.16	1.26	
	10.76	.2	20.43				2.0			.039	.038	1.32	
A0553+03	5 53.08	3 23.1	203.43	347.7	.CI...P.	11	P200C						
	5.28	.6	-10.77	-65.9									
A0558+28	5 58.62	-28 59.6	234.87	247.5	.SB.9..	9	P048N			1.38	.22	1.33	
D233	3.92	-1	-23.10	-71.7	SB *	9	2.1			.039	.038	1.35	
N2139	5 59.06	-23 40.3	229.53	262.2	.SXT6..	6	W100V		3 S	1.34	.06	1.33	0.99
	4.18	-2.2	-21.13	-75.0	S SP	3	3.4	I A *		.042	.031	1.36	.03
A0559+21	5 59.2	-21 42	227.59	269.1						1.42	.49	1.31	
	4.27	-2	-20.36	-76.0						.075	.100		
A0600+07	6 0.4	7 50	200.38	356.9						.61	.00	.61	
	5.46	-5	-7.03	-63.2						.050	.050		
N2179	6 5.92	-21 44.3	228.27	266.1	.SAS0..	0	W100V			1.17	.15	1.13	0.75
	4.27	-1.2	-18.94	-77.4	S 0		3.1	D G	D3	.095	.061	1.19	.04
A0608+69	6 8.0	69 45	144.58	22.9	.S..6*	6*	P048N			1.37	.06	1.31	
	11.15	-2.0	22.15	-4.2			2.1			.039	.038	1.35	
N2188	6 8.3	-34 5	240.83	233.2	.SBS9./	9	W100V		3 S	1.57	.51	1.45	1.05
	3.65	-1.5	-22.82	-69.0			3.4			.059	.037	1.47	.04
A0609+71A	6 9.3	71 9	143.19	23.2	.SXT3..	3	P048N			1.36	.09	1.34	
	11.63	-2.2	22.71	-2.9			2.2			.039	.038	1.39	
A0609+71B	6 9.80	71 3.0	143.31	23.3	.L...*	-2*	P048N			1.32	.05	1.31	*
MK 3	11.59	-2.3	22.72	-3.0			2.2			.071	.071	1.38	
N2196	6 10.04	-21 47.6	228.71	263.8	.PSA1..	1	W100V			1.44	.10	1.42	1.00
	4.27	-1.8	-18.08	-78.2	S 3	2*	3.6	S K	D3	.034	.029	1.48	.03
N2146	6 10.75	78 22.5	135.66	24.6	.SBS2P.	2	P200V		2	1.78	.20	1.73	1.40
	15.88	-2.7	24.90	4.2	S NT*		4.8	I P K *		.026	.020	1.78	.06
A0613+26	6 13.30	-26 33.9	233.67	245.1	.I...9..	10	P048F			1.13	.06	1.12	
D234	4.05	-2.2	-19.21	-75.7		9	1.8			.100	.100	1.14	
N2206	6 14.0	-26 45	233.91	244.2	.SXT4..	4	P048N			1.37	.23	1.32	
	4.04	-2.3	-19.13	-75.7			2.1			.039	.038	1.36	
N2207	6 14.24	-21 21.2	228.69	263.2	.SXT4P.	4	W100V			1.63	.17	1.59	*
	4.29	-2.4	-17.01	-79.2	S 5 T	1*	3.9	S F	4	.042	.030	1.64	
I2163	6 14.34	-21 21.5	228.71	263.1	.SBS7P.	5	W100V			1.43	.34	1.35	
	4.29	-2.4	-15.99	-79.3	S T		3.1			.062	.045	1.40	
N2146A	6 15.89	78 33.3	135.54	24.9	.SXS5*	5	P048C			1.51	.37	1.42	
	16.02	-3.5	25.19	4.3			2.2			.039	.038	1.46	
A0617+59A	6 17.1	59 8	155.60	22.0	.S...0..	0	P048N			1.24	.48	1.13	
	8.84	-3.1	19.38	-14.9			1.6			.046	.045	1.19	
A0617+59B	6 17.2	59 8	155.60	22.0	.L...*	-2*	P048N			1.21	.14	1.18	
	8.84	-3.1	19.38	-14.9			1.9			.051	.058	1.25	
A0618-37	6 18.32	-37 10.3	244.69	224.6									
	3.48	-2.9	-21.87	-67.2									
A0618-16	6 18.5	-16 2	224.09	292.8	.SAT6..	6	P048C			1.28	.17	1.25	
	4.52	-3.0	-13.91	-81.8			2.0			.061	.058	1.30	
A0618-20	6 18.9	-20 2	227.89	266.9	.S...P.		P048N			1.38	.07	1.36	
	4.35	-3.1	-15.48	-80.8			2.3			.039	.038	1.42	
N2217	6 19.67	-27 12.5	234.86	238.9	.RLBT... SB0	-1	W100V		D4	1.68	.04	1.67	1.15
	4.02	-3.1	-18.13	-76.1			4.1			.048	.032	1.73	.04
A0621+74	6 21.46	74 19.9	140.14	24.6	.SBS3..	3	P048N			1.28	.29	1.21	
MK 4	12.98	-4.0	24.48	.1			1.8			.039	.038	1.26	
N2223	6 22.50	-22 48.6	230.88	250.4	.SXR3..	3	W060V			1.52	.05	1.51	1.22
	4.22	-3.6	-15.83	-79.9	SX2	3*	3.4	S F	3 S	.035	.030	1.57	.04
N2227	6 23.8	-21 57	230.19	253.0	.SBS7P.	6	P048C			1.36	.28	1.30	
	4.26	-3.8	-15.21	-80.7	S T		2.0			.061	.058	1.35	
A0625+74	6 25.0	74 27	140.08	24.9	.SASS*	5	P048N			1.24	.00	1.24	
	13.03	-4.6	24.74	.2			2.1			.039	.038	1.28	
A0635+75	6 35.41	75 40.2	138.91	25.7						.83	.07	.81	
MK 5	13.66	-6.1	25.65	1.3						.050	.050		
A0636+53	6 36.7	53 17	162.42	24.2									
	8.07	-5.9	19.90	-21.0						.75	.29	.68	
A0637+53	6 37.1	53 20	162.39	24.2						.075	.100		
	8.08	-5.9	19.98	-20.9									
A0638+65	6 38.7	65 15	150.18	25.2	.S..6*P	6*	P048N			1.23	.12	1.20	
	9.87	-6.3	23.65	-9.1			1.9			.039	.038	1.24	
I0449	6 39.88	71 23.7	143.63	25.7	.E..2..	-5*	P048C			1.30	.11	1.28	
	11.59	-6.6	25.14	-2.9			2.1			.071	.071	1.35	
N2272	6 40.7	-27 24	236.94	219.6	.LA...-	-3	P048C			1.33	.12	1.30	0.80
	4.02	-6.2	-13.91	-77.9			2.4			.075	.100	1.39	.05
N2256	6 40.77	74 17.4	140.49	25.9	.LX...*	-3	P048C			1.42	.06	1.40	
	12.84	-6.8	25.75	-1			2.4			.071	.071	1.47	
N2258	6 41.26	74 32.2	140.23	26.0	.LAR0..	-2	P048C			1.42	.18	1.38	
	12.97	-6.9	25.82	.2			2.2			.071	.071	1.44	
N22738	6 42.05	60 23.7	155.38	25.4	.SBS7P.	5	P048C			1.44	.24	1.39	
	8.97	-6.7	22.76	-13.9			2.2			.039	.038	1.43	
N2280	6 42.83	-27 35.2	237.31	217.2	.SAS6..	6	W100V			1.75	.24	1.70	*
	4.01	-6.5	-13.55	-77.8	S 3	3	4.1			.038	.030	1.75	
A0643+66	6 43.9	66 18	149.20	25.8	.SB.4S.	4	P048N		D3 S	1.40	.92	1.18	
	10.08	-7.0	24.42	-8.0			1.5			.039	.038	1.22	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N _H N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
A0526-16				.42											2171 1 1 10	2002 -169	
N1947	12.2 11.82	11.835 .06	12.3 13.9	.39 11.41 .59	1.03 .04	0.53 .04	1.04 .02	0.57 .02	.93 .44						902* 0 2 100	653 -249	PT
A0527+73															1242 1 0 10	1424 182	
N1954				.46									.91 1 .01				
N1964	12.0 11.48	11.50 .08	11.7 14.3	.37 10.81	0.78 .03	0.22 .04	0.88 .03	0.36 .03	.61 .08			1.56 1 .02		1.83	1688 1 1 39	-165 1498 -190	PT
N1961	11.6 11.35	11.9 .1	13.9 14.5	.60 11.15 .41	0.73 .03	0.27 .05	0.84 .03	0.33 .04	.54 .13			1.11 1 .01		2.64	3890 1 1 46	4056 166 850	PT
N2082	12.8 12.96														0 1 47 1805	-254 1576	
N2090	12.4 11.99	*	13.8 14.4	.33	*	*						1.07 1 .01			1 0 30 10249	-229 10023	
A0548-31				.35											0 1 270 819	-226 1002	
A0549+75				.54						0 0 2		1.18 1 .01			1 0 10	183	
A0551+78				.53													
A0553+68				.57											4759 1 1 15	4952 193	
A0553+03 22 40 A0558-28		*		1.27 .39	*	*						.90 2 .01 .99 1 .01			806 2 2 8 1396	159 689 -117 1171	
N2139	12.5 12.48	12.05 .07	12.5 13.4	.44 11.55	0.34 .03	-.30 .03	0.40 .02	-.25 .03	.21 -.39						1.28 1 .01	1591 -212	
A0559-21				.46													
A0600+07 22 42 N2179		17.6 .15		2.18	.76 .06	.33 .07									5398 0 2 40	-207 5295 -103	
A0608+69	13.0 13.35	13.40 .08	12.6 13.7	.49 .53	0.95 .02	0.37 .03	0.99 .03	0.44 .03									
N2188	12.6 12.43	12.3 .1	13.0 13.7	.39 11.45	0.48 .02	-.21 .04	0.42 .02	-.28 .03	.28 -.36				*		687 0 2 13	161 446 -241	P
A0609+71A				.52													
A0609+71B		*		.52	*	*	*	*									
N2196	12.6 12.39	12.1 .1	12.6 13.9	.51 11.48	0.87 .03	0.27 .03	0.94 .02	0.45 .02	.72 .16						4054 1 3 10	4219 165	
N2146	11.6 11.07	11.20 .08	13.7 14.4	.51 10.52 .47	0.74 .04	*	0.82 .03	0.22 .05	.58	2.08 4 3 5	.50 .72	1.11 1 .01 .52 1 .01	.88 3.27		2294 0 1 48 838	2080 -214 1028	PT
A0613-26															1 3 21 1800	190 1572	
N2206				.47											1 0 20	-228	
N2207	12.3 11.84	11.35 .13	13.9	.55 10.65 .55	0.70 .05	*	*	*	.52	1.60 2 2 6	.885 1.02		1.95		2680 0 1 60	-229 2465 -215	S
I2163																	
N2146A				.50													
A0617+59A 72 68				.54												190 116	
A0617+59B 72 68				.54													
A0618-37				.42						2.48 2 1 5	.67 .67				9838 0 2 35	9587 -251	
A0618-16				.70											2845 1 1 13	2643 -202	
A0618-20				.60													
N2217	12.6 11.69	11.45 .09	12.7 14.6	.49 10.91	1.03 .04	0.54 .06	1.06 .04	0.60 .05	.90 .43				*		1476 0 2 56	-214 1243 -233	PT
A0621+74				.50											4785 0 1 95	4959 174	
N2223	12.7 12.22	12.15 .09	13.7 14.5	.57 .60	0.77 .05	0.31 .05	0.83 .03	0.37 .03							2221 0 1 20	-223 1999 -222	
N2227															5573 1 1 13	5747 174	
A0625+74				.49											794 1 1 17	971 177	
A0635+75				.48								.45 1 .01					
A0636+53				.50													
A0637+53				.50													
A0638+65				.47													
I0449				.47													136
N2272		12.85 .13	12.3 14.1	.63	0.97 .05	0.52 .06	0.99 .04	0.58 .04								161 -244	
N2256				.47													
N2258				.47													171
N2273B				.46													172
N2280	12.7 11.96	*		.65	*	*	*	*				1.73 1 .01			1907* 1 1 10	115 1662 -245	
A0643+66			15.0	.46													139

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L 8 (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D ₀) Log D ₀ (12)	Log A _g m.e. (13)
A0644-74.	6 44.42	-74 11.1	285.27	207.4	.RING..	10R	....V						
N2273	-2.56	-6.2	-26.59	-31.4	.SXT0*	0	P048C			1.55	.11	1.52	
MK620	6 45.6	60 54	154.98	25.8			2.6			.039	.038	1.58	
I0450	9.03	-7.2	23.31	-13.4	.LX.++	-1	P048C			1.10	.21	1.05	
MK 6	6 45.72	74 29.1	140.34	26.3			1.6			.050	.050	1.11	
I0451	12.90	-7.5	26.11	.1	.SXR2S.	2	P048C			1.21	.07	1.20	
	6 46.38	74 32.5	140.28	26.3			1.9			.039	.038	1.25	
	12.93	-7.6	26.16	.2			1.7			1.17	.24	1.12	
N2290	6 47.67	33 29.8	182.46	25.3	RSA.0*	0	P048C			.037	.032	1.19	
	6.58	-7.3	14.46	-40.9									
N2291	6 47.69	33 35.1	182.38	25.3	.LA.0*	-2	P048C			1.10	.00	1.10	
	6.59	-7.3	14.50	-40.8			1.8			.049	.053	1.18	
N2294	6 47.90	33 35.2	182.39	25.4	.E.6.S.	-5S	P048C			1.05	.44	.95	
	6.59	-7.4	14.54	-40.8			1.2			.040	.038	1.04	
A0648+26	6 48.2	26 49	188.76	25.2			.70			.00	.00	.70	
	6.24	-7.4	11.82	-47.5			.075			.100	.100	.68	
A0648+27	6 48.9	27 32	188.16	25.5			.075			.100	.100	.68	
	6.28	-7.5	12.26	-46.8			.075			.100	.100	.68	
A0650+69	6 50.0	69 39	145.70	26.5	.SXS1P*	1	P048C			1.62	.31	1.55	
	10.94	-8.0	25.65	-4.7			2.5			.050	.050	1.60	
A0650+80	6 50.0	80 4	134.17	26.6	.SXT5*	5	P048N			1.20	.08	1.18	
	17.32	-8.4	27.00	5.7			1.9			.039	.038	1.22	
A0650+50	6 50.71	50 25.0	166.06	26.4									
MK373	7.75	-7.8	21.03	-23.9									
N2310	6 52.4	-40 44	250.72	206.9	.L....	-2	S030V		3 S	1.70	.61	1.56	
	7.29	-7.8	-16.90	-64.8			2.1			.158	.079	1.64	
A0700+56	7 0.65	56 35.7	160.06	27.9	.18.9..	10	P048N			1.17	.10	1.15	
D 40	8.37	-9.3	24.14	-17.7	SX	9	1.8			.046	.045	1.17	
N2325	7 0.70	-28 37.4	239.97	199.0	.E.4...	-5	W100V			1.36	.19	1.32	1.03
	3.98	-9.0	-10.41	-76.9	E 4		3.3			.129	.066	1.45	.06
N2268	7 0.81	84 27.8	129.25	26.9	.SXR4..	4	W060V	S F	4	1.53	.19	1.49	1.00
	26.51	-10.6	27.55	10.1	S 3 N *		3.2		4VS	.033	.025	1.53	.05
A0702+67	7 2.37	67 45.6	147.97	27.6									
MK375	10.32	-9.7	26.46	-6.6									
I2174	7 2.44	75 25.9	139.42	27.3	PSBR0*	0	P048C			1.06	.06	1.05	
	13.25	-9.9	27.29	1.1			1.6		3VS	.038	.035	1.10	
N2314	7 3.89	75 24.4	139.46	27.4	.E.3...	-5	W060V	E4 K		1.14	.07	1.30	0.79
	13.22	-10.1	27.38	1.1	E 1P *		2.9		4	.063	.049	1.37	.05
A0704+61	7 4.5	61 41	154.69	28.2	.SBT3..	3	P048N			1.55	.07	1.53	
	9.07	-9.9	25.70	-12.6			2.6			.039	.038	1.57	
N2326A	7 4.71	50 42.7	166.44	28.8	.SAS9*	9	P048C			1.06	.19	1.01	
	7.74	-9.8	23.25	-23.6			1.5			.039	.038	1.03	
A0705+53	7 5.10	53 31.6	163.49	28.7	.I..9..	10	P048N			1.14	.07	1.13	
D 41	8.01	-9.9	24.02	-20.8	I	9*	1.8			.046	.045	1.15	
N2329	7 5.4	48 42	168.58	29.0	.L...*	-3*	P048N			1.20	.07	1.18	
	7.56	-9.9	22.81	-25.6			1.9			.050	.050	1.24	
N2339	7 5.42	18 51.7	197.84	32.0	.SXT4..	4	W100V	S AF	3*	1.44	.11	1.42	1.00
	5.87	-9.8	12.06	-55.4	S 5	4	3.6	S *AF*	4VS	.034	.028	1.48	.03
A0705+71	7 5.6	71 55	143.38	27.7	.S...P*	3*	P048C			1.54	1.10	1.28	
	11.59	-10.2	27.22	-2.4			1.6			.039	.038	1.32	
N2341	7 6.3	20 40	196.25	32.1	.P.....		P048N			1.03	.02	1.02	
	5.95	-9.9	13.01	-53.5			1.6			.039	.038	1.08	
N2342	7 6.4	20 43	196.22	32.1	.S...P.		P048N			1.20	.03	1.19	
	5.95	-9.9	13.05	-53.5			1.9			.039	.038	1.25	
A0706+71	7 6.8	71 50	143.48	27.8	.S...SP		P048N			1.31	.06	1.29	
	11.54	-10.4	27.31	-2.5			2.1			.071	.071	1.33	
A0708+73A	7 8.2	73 34	141.55	27.8	.RING.A	-5P	P200V						0.55
	12.24	-10.6	27.54	-8									.04
A0708+73B	7 8.2	73 34	141.55	27.8	.RING.B	10P	P200V						
	12.24	-10.6	27.54	-8						1.39	.34	1.31	
A0708+73.	7 8.2	73 34	141.55	27.8	.RING..	10P	P200V			.046	.045	1.33	
	12.24	-10.6	27.54	-8						1.30	.01	1.30	0.98
N2344	7 8.76	47 15.0	170.26	29.8	.SXT5*	5	P048C			1.04	.045	1.34	.05
	7.43	-10.3	22.94	-27.0			2.2			.046	.045	1.34	
N2276	7 10.52	85 50.9	127.68	27.1	.SXT5..	5	W060V	S AF	4	1.42	.02	1.42	
	32.86	-12.3	27.71	11.5	S 5 K	1*	3.2		4 S	.035	.028	1.46	
I2179	7 10.72	65 0.9	151.14	28.7	.E.1...	-5	W060V			1.02	.02	1.02	0.60
	9.64	-10.8	26.91	-9.3			2.4			.049	.045	1.08	.09
N2347	7 11.27	64 48.1	151.39	28.7	PSAR3*	3*	W060V	E2 *K	3	1.31	.13	1.28	0.77
	9.59	-10.8	26.94	-9.5	S 3 N *		2.9		4ES	.035	.030	1.32	.03
A0713+63	7 13.18	63 34.6	152.78	29.0									
MK379	9.34	-11.1	26.98	-17.7									
N2300	7 15.77	85 48.6	127.71	27.2	.LA.0..	-2	P200C	E3 K		1.49	.07	1.48	*
	32.33	-13.0	27.81	11.5	E 1		4.0		3VS	.061	.039	1.54	
N2369	7 16.0	-62 16	273.33	203.0	.SBS1..	1	B060V		4	1.66	.44	1.56	
	1.15	-10.9	-21.02	-43.2			3.2		3 S	.075	.048	1.63	
N2369A	7 18.3	-62 49	273.98	202.8	.S...*		S030V						
	1.07	-11.2	-20.96	-42.6									
N2336	7 18.46	80 16.6	133.97	27.8	.SXR4..	4	W060V	S F	1	1.84	.24	1.78	*
	17.05	-12.3	28.22	6.0	S 3	1	3.8	SX FG	2VS	.032	.024	1.82	
A0718-34	7 18.95	-34 1.5	246.63	190.1									
	3.74	-11.5	-9.30	-70.7									
N2369B	7 19.8	-61 57	273.17	202.4	.SB.5*	5	S030V			1.38	.03	1.37	
	1.23	-11.4	-20.50	-43.4			2.5			.316	.183	1.42	
A0720+58	7 20.4	58 5	159.03	30.5	.SXT3..	3	P048N			1.28	.23	1.23	
	4.46	-12.0	27.05	-16.1			1.9			.039	.038	1.27	
N2397A	7 21.4	-68 45	280.14	203.5	.SA.5*	5S	S030V			1.18	.12	1.15	
	-22	-11.6	-22.56	-36.7			2.0			.183	.120	1.20	
N2397	7 21.5	-68 54	280.30	203.5	.SBS2..	2	S030V		3	1.35	.28	1.28	
	-26	-11.6	-22.59	-36.5			2.2			.141	.091	1.35	
I0467	7 21.92	79 58.5	134.30	28.0	.SXS5*	5*	W060V			1.53	.36	1.45	
	16.61	-12.8	28.38	5.7			3.1			.035	.031	1.49	
A0722+72	7 22.31	72 40.4	142.61	28.9	.P.....		P048N			.99	.37	.90	
MK 7	11.70	-12.5	28.53	-1.6			1.2			.050	.050	.94	
A0722+30	7 22.46	30 3.3	188.71	35.6	.S...*		P048N			.71	.51	.59	
	6.34	-12.1	20.02	-43.8			.5			.050	.050	.63	
N2377	7 22.55	-9 33.6	225.36	77.7	.SAS4*	4	P048C			1.26	.05	1.25	
	4.80	-12.0	2.94	-80.5			2.0			.050	.050	1.45	
N2366	7 23.62	69 19.1	146.43	29.5	.1BS9..	10	P200V	L*A		1.88	.33	1.80	*
D 42	10.56	-12.6	28.54	-4.9	I	8	4.8			.034	.024	1.82	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _C (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₀ N ₀ m.e. (28)	V ₀ ΔV (29)			
A0644-74.		*		.55	*										6466	6208		
N2273				.46											0 1 90	-258		
10450				.46											1950	2066		
10451				.46											0 1 100	116		
N2290				.59											5660	5831		
															0 2 40	171		
N2291				.59												172	P	
N2294				.59												-12	P	
A0648+26				.69												-12	P	
A0648+27				.67											4740	4696		
A0650+69				.45											0 1 46	-44		
															12270	12229		
															0 1 120	-41		
A0650+80				.47												152		
A0650+50				.46											4964	5155		
N2310	12.8			.56											1 1 13	191		
A0700+56	12.20		14.0	.42											5958	6025		
N2325	12.9	12.2	12.8	.85	1.02	0.62	1.06	0.66				.81			0 1 220	67		
	12.60	.1	13.5		.04	.04	.03	.03				1 .01			1383	-270		
N2268	12.2*	12.20	12.7	.48	0.72	0.02	0.75	0.11	.56							93		
A0702+67	11.71	.08	14.2	.43	.03	.05	.04	.05	-.10						2261	2466	T	
															0 1 69	205		
I2174				.45											3594	3736		
															0 1 220	142		
N2314	12.9	12.90	12.3	.45	0.99	0.56	1.03	0.62	.85							173		
A0704+61	12.65	.08	14.3	.42	.03	.06	.03	.05	.48						3861	4034		
															0 2 27	173		
N2326A				.42												115		
A0705+53				.42												64		
N2329				.42												77		
N2339	12.7	12.30	12.8	.66	0.74	0.10	0.84	0.20	.55			1.05			5766	5820		
A0705+71	12.46	.08	14.1	.43	.03	.04	.02	.03	-.03			1 .01	2.40		0 1 120	54		
												.91			1 1 12	2334		
												1 .10			3150	3309		
N2341				.62											1 2 18	159		
N2342				.62												-81		
A0706+71				.43												-81		
A0708+73A		14.22	12.5	.44	0.89	0.27	0.90	0.32								158		
V123		.08		.44	.03	.03	.02	.02								165	P	
A0708+73B		*		.44	*	*	*	*								165	P	
V123				.44														
A0708+73.				.44											2541	2706		
N2344	12.85	13.2	14.2	.42	0.80	0.20	0.87	0.33	.70			.77	2.22		0 2 49	165		
	.13	14.2	12.4	.42	.05	.05	.04	.04	.11			1 .01			955	1001		
N2276	12.4*	11.95	13.8	.48	0.59				.46			1 .01			1 1 19	46		
72134	11.91	.09	13.8	.44	.04							1 .10	2.37		2369	2579	PST	
I2179	13.60	12.1	14.1	.41	1.05	0.60	1.08	0.65							1 1 28	210		
	.07	13.6	12.6	.41	.03	.1	.03	.1								129		
N2347	12.7	13.30	12.6	.41	0.77	0.13	0.88	0.18	.62						4521	4649		
	12.80	.09	14.4	.41	.03	.04	.03	.04	.02						0 1 62	128		
A0713+63				.40												4781	4903	
N2300	12.2	12.00		.47	1.04	0.66	*	*	.91						0 1 105	122		
N2369	11.77	.08	14.1	.62	.03	.06			.55						1958	2167	PT	
N2369A	13.1			.62						1.34*		1.235			0 2 25	209		
	12.52		14.6	.63						0 1 1					3296	3017		
N2336	12.4	11.15	14.6	.45	0.66	*		.50							0 1 40	-279		
	11.50	.09	10.49	.45	.04										2199	-279	T	
A0718+34				1.01						2.32	1.155				1 1 28	190		
N2369B				.64						1 1 4	.66				8979	8708		
A0720+58				.38											0 1 40	-271		
N2397A				.63												-280		
N2397	12.8			.63												95		
	12.93		13.8	.63											1299	-272		
10467				.45											0 2 29	1027		
A0722+72				.42												-272		
72153				.43								1.06			3091	188		
A0722+30				.43								1 .02			1 3 32	3251		
N2377			2.13							1.08*	.935				5730	160		
										1 1 1	.225				0 1 120	5688		
N2366	12.6*	11.40	14.8	.40	0.55	*		.38		2.15	1.08				2355	-42		
	11.80	.09	10.67	.40	.03					5 2 3	1.08				0 1 30	2142		
												2.18	.44		107	-213	PT	
												3 .01			3 1 7	252		
																145		

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ (12)	Log A _g m.e. (13)
I2184. MK 8	7 23.64	72 13.8	143.11	29.1						1.10	.07	1.09	
N2379	11.51	-12.6	28.62	-2.0						.050	.050		
A0724+40	7 24.18	33 54.8	184.96	35.2	.LA...*	-2	P048C			1.03	.00	1.03	*
D 43	6.53	-12.4	21.68	-39.9			1.6			.051	.055	1.08	
N2389	7 24.83	40 52.2	177.82	34.0	.I...9..	10	P048N			1.20	.12	1.17	
A0727+63	6.92	-12.5	23.93	-33.0			1.9			.046	.045	1.19	
MK 73	7 25.82	33 57.7	185.03	35.7	.SXT5..	5	W060V		4VS	1.33	.10	1.30	0.85
	6.53	-12.6	22.02	-39.8			2.9			.035	.031	1.33	.03
I2200A	7 27.12	63 20.9	153.23	30.6									
I2200	9.20	-13.0	28.51	-10.7									
A0727+73	7 27.4	-62 10	273.73	201.2	.E...S.	-55	S030V			1.25	.12	1.22	
A0728+55	1.24	-12.5	273.80	201.2	.S...*		S030V			.224	.129	1.32	
MK 75	7 27.7	-62 14	19.74	-43.0									
A0728+60	1.23	-12.5	141.38	29.2	.S...2..	2	P048N			1.13	.73	.96	
A0729+66	7 27.8	73 45	28.93	-4			1.1			.050	.050	1.00	
D 44	7 28.08	-13.2	162.31	32.1									
N2417	7 28.49	55 18.2	177.82	34.0									
A0730+73	8.09	-13.1	155.93	31.2									
N2403	7 28.6	60 59	128.46	-13.0									
A0732+58	8.81	-13.1	149.10	30.3	.I...9..	10	P048F			1.47	.16	1.43	
A0733+63A	7 29.23	66 59.6	28.96	-7.1			2.4			.100	.100	1.45	
A0733+63B	9.92	-13.3	273.81	200.9	.SA...*	4	S030V			1.35	.06	1.34	
A0734+42	7 29.5	-62 9	19.51	-43.0			2.7			.158	.105	1.40	
N2434	7 30.8	73 49	141.30	29.4	.SB...6*	6*	P048N		2 S	1.15	.60	1.30	
N2427	12.07	-13.6	29.13	-3			1.8			.039	.038	1.33	
A0736+48	7 32.05	65 42.7	150.58	30.8	.SXS6..	6	P200V	S A	1	2.25	.21	2.20	1.80
A0737+70	9.61	-13.6	29.19	-8.3	S 5	5	5.0	S F	1	.023	.016	2.23	.05
A0738+40	7 32.70	58 53.0	158.37	32.1	.L...P\$	-25	P048C						0.2
A0738+49	8.49	-13.7	28.75	-15.0									.1
A0739+16	7 33.28	63 38.0	152.97	31.3	RSXS0..	0	P048C						
A0739+70	9.20	-13.8	29.21	-10.3									
A0741+29	7 33.50	2 49.0	215.64	56.2	.I...9..	10	P048N			1.22	.15	1.18	
A0742+62	5.25	-13.5	11.17	-69.0	I	9	1.9			.100	.100	1.21	
A0743+61	7 33.65	35 21.3	184.14	37.3	.I...9\$.	10\$	P048C			1.01	.00	1.01	*
A0743+74	6.58	-13.7	23.98	-38.1			1.6			.038	.037	1.03	
A0744+28	7 33.89	63 44.1	152.85	31.3	.E...0P\$	-5	P048C			.63	.14	.60	
A0745+56A	9.22	-13.9	29.28	-10.2			.7			.075	.100	.66	
A0745+56B	7 34.0	42 3	177.07	35.7	.SXS4..	4	P048N			1.16	.13	1.13	
A0746+34	6.97	-13.7	25.90	-31.5			1.8			.039	.038	1.16	
A0747+30	7 35.0	-69 10	281.00	202.1	.E...0..	-5	S030V			1.40	.00	1.40	0.95
A0748+74	-.21	-13.4	-21.54	-36.1			2.6			.224	.100	1.50	.05
A0749+74	7 35.02	-47 31.4	260.30	193.6	.SXS8..	8	R074V			1.75	.34	1.67	
A0751+55	2.93	-13.6	12.70	-56.9	.SBS7..	7	P048N		2VS	.054	.031	1.73	
A0751+55	7 36.0	48 59	169.72	34.5			1.8			.039	.038	1.13	
A0751+55	7 36.55	-69 25.0	281.31	202.0	.SBS3..	3	S030V		4	1.78	.04	1.77	*
A0751+55	-.27	-13.6	-21.50	-35.8			3.3		3VS	.044	.029	1.84	
A0751+55	7 37.27	39 21.0	180.14	37.1	.SBR3*/	3*	W060V			1.60	.73	1.42	0.90
A0751+55	6.79	-14.1	25.81	-34.0			2.8		3VS	.036	.033	1.46	.03
A0751+55	7 37.93	65 17.7	151.08	31.5									
A0751+55	9.47	-14.4	29.78	-8.6									
A0751+55	7 38.02	40 13.8	179.24	37.0	.I...9..	10	P048N			1.27	.01	1.27	
A0751+55	6.84	-14.2	26.17	-33.1			2.1			.046	.045	1.29	
A0751+55	7 38.78	49 55.8	168.61	34.8	.SB...3..	3	P048N			1.16	.00	1.16	0.6
A0751+55	7.52	-14.4	28.38	-23.7			1.9			.039	.038	1.19	.1
A0751+55	7 39.05	16 55.1	203.11	46.5	.IBS9..	10	P048C			1.67	.09	1.65	
A0751+55	9.76	-14.3	18.54	-55.5	I	9\$	.071			.071	.071	1.67	
A0751+55	7 39.9	70 10	145.46	30.7	.SBS3*.	3	P048N			1.35	.33	1.27	
A0751+55	10.63	-14.7	29.95	-3.8			1.9			.039	.038	1.31	
A0751+55	7 41.0	29 21	190.90	41.3	.S...P.		P048N			1.43	.31	1.36	
A0751+55	6.27	-14.6	23.56	-43.5			2.1			.039	.038	1.40	
A0751+55	7 41.62	85 17.3	128.22	27.7	.SXT2*.	2	P048C			1.36	.25	1.30	
A0751+55	28.06	-16.1	28.38	11.0			2.0			.050	.050	1.35	
A0751+55	7 42.64	62 30.3	154.32	32.6									
A0751+55	8.94	-15.0	30.22	-11.2									
A0751+55	7 43.12	61 3.4	156.00	32.9	.S...3..	3	P048N			1.31	.36	1.22	0.80
A0751+55	8.71	-15.0	30.21	-12.6			1.8			.039	.038	1.26	.05
A0751+55	7 43.28	74 27.5	140.50	30.1	.L...*.	-3	P048N			1.10	.29	1.03	
A0751+55	12.18	-15.3	29.95	.5			1.5			.050	.050	1.09	
A0751+55	7 43.51	39 9.3	180.70	38.6	.RING.A	-2P	P200V			1.36	.14	1.33	0.70\$
A0751+55	6.76	-15.0	26.92	-33.9			4.0			.075	.100	1.38	.04
A0751+55	7 43.55	39 8.2	180.72	38.6	.RING.B	10P	P200V			1.32	.10	1.30	0.9
A0751+55	6.76	-15.0	26.93	-34.0			4.0			.061	.058	1.32	.1
A0751+55	7 43.8	59 8	158.22	33.5	.SX...3..	3	P048N			1.36	.28	1.29	
A0751+55	8.44	-15.1	30.19	-14.5			2.0			.039	.038	1.32	
A0751+55	7 44.0	28 4	192.46	42.7	.S...4..	4	P048C			1.12	.09	1.09	
A0751+55	6.20	-15.0	23.75	-44.6			1.7			.061	.058	1.12	
A0751+55	7 44.68	74 29.1	140.46	30.2	.SXS5\$.	5*	T052C			1.12	.08	1.10	
A0751+55	12.17	-15.5	30.04	.5			2.4			.039	.038	1.13	
A0751+55	7 45.6	-71 17	283.47	201.7	.SA...5.	5	S030V			1.17	.05	1.16	
A0751+55	-.76	-14.7	-21.48	-33.8			2.1		3 S	.158	.100	1.22	
A0751+55	7 45.9	56 2	161.83	34.5						.70	.25	.64	
A0751+55	8.06	-15.3	30.24	-17.5						.075	.100		
A0751+55	7 46.3	56 1	161.85	34.5						1.12	.00	1.12	
A0751+55	8.05	-15.4	30.29	-17.5						.075	.100		
A0751+55	7 46.34	73 9.4	141.98	30.6	.SXR3*.	3*	W060V	S *AF	2	1.35	.05	1.33	
A0751+55	11.57	-15.6	30.27	-8	S 5	3*	3.0		3VS	.034	.029	1.37	
A0751+55	7 46.9	34 33	185.87	40.9						1.03	.00	1.03	
A0751+55	6.50	-15.4	26.34	-38.2						.071	.071		
A0751+55	7 47.0	30 51	189.80	42.4	.SB...3P.	3	P048N			1.28	.18	1.23	
A0751+55	6.32	-15.4	25.27	-41.7			2.0			.039	.038	1.26	
A0751+55	7 48.0	74 32	140.38	30.4	.S...1..	1	P048N			1.45	.47	1.34	
A0751+55	12.13	-15.9	30.25	.6			2.0			.039	.038	1.39	
A0751+55	7 51.09	55 50.1	162.12	35.3	.S...P.		P048N			1.08	.26	1.02	
MK 84	8.00	-16.0	30.94	-17.5			1.5			.039	.038	1.05	
N2470	7 51.7	4 35	216.17	63.7	.S...2..	2	P048N			1.37	.47	1.23	
I2209	5.30	-15.9	16.01	-65.1			1.8			.039	.038	1.28	
MK 13	7 51.96	60 26.3	156.76	34.2	.SRT3*.	3	W060V			1.06	.07	1.04	0.70
	8.55	-16.2	31.27	-13.0			2.4		3VS	.038	.036	1.07	.05

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₋ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ N ₃ m.e. (28)	V ₀ ΔV (29)		
I2184. 72156 N2379		*		.41	*	*						.90 1 .01			3470* 1 4 37 4030 0 1 65 356 366	3628 158 4006 -24 366	
A0724+40		14.45 .08	14.5	.41 13.98 .39	.096 .03	.059 .06	*	*	.83 .52						0 1 65 356 366	-24 366	
N2389		13.33 .06	13.1	.40 12.83 .38	.050 .02	-.12 .03	.060 .03	-.09 .03	.36 -.22			1 .01			1 0 7 3816 0 1 67 4444 0 2 43	10 3792 124 4562 118	
A0727+63																	
I2200A				.67													
I2200				.67												-281	
A0727+73				.42												-281	
A0728+55				.37												163	
A0728+60 72162				.38											8926 0 3 38 9036 0 1 280	9006 80 9143 107	
A0729+66				.39													
N2417				.68												134	
A0730+73				.41											3179 0 1 20	2897 -282	
N2403	10.2 9.20	8.85 .09	13.3 14.4	.38 8.30	.050 .04		.058 .04		.37			2.88 4 .01			131 5 2 4 11955 0 1 95	163 259 128 12051 96	
A0732+58		14.8 .1	11.3	.37	.055 .05	-.5 .1	.045 .05	-.7 .1					1.06				
A0733+63A				.38													
A0733+02				.67												119	
N2415		12.82 .07	12.7	.38 12.44 .38	.043 .02	-.21 .02	*	*	.32 -.29			.39 1 .01		3.15	3798 1 1 27	-171 3779 -19	
A0733+63B				.36													
A0734+42				.36											5900 1 1 15	119 5913 13	
N2434	12.8 12.32 12.4*	12.30 .09 12.36	12.5 14.3	.66 11.62 .88	1.08 .04 .78	*	1.10 .03	.058 .06	.92						1477 0 1 100	1204 -273	
N2427	11.64	.14	15.1	.35	.06 -.25 .07												
A0736+48				.35											6373 1 1 13	-288 6420 47	
N2442	11.8 11.03	11.225 .14	14.9 10.51	.67 10.51	*	*	*	*		1.65* 1 1 4	.578 1.15		1.965		657 0 1 180	384 -273	
N2424		13.60 .09	13.6 14.6	.36 14.6	.097 .03	.036 .03	1.02 .03	.047 .03								0	
A0737+65		*		.37	*												
A0738+40				.36											11095* 0 3 34 365	11220 125 368	
A0738+49		13.5 .1	12.0	.35 13.10 .44	.055 .1	-.4 .1	.050 .05	-.70 .05	.43 -.49			.99 1 .01			1 0 10 6598 0 4 27	3 6650 52	
A0739+16				.39								1.48 1 .01			266 1 0 10 3875 1 1 17	155 -111 4022 147	
A0739+70				.39													
A0741+29				.38													
I0469				.46													
A0742+62				.36												-52	
A0743+61		13.6 .1	13.1 14.1	.36 12.89 .41	.065 -1	-.35 .1	.062 .05	-.50 .05	.44 -.50						5669 0 2 43 8685 0 1 95 3891 0 1 105	207 5781 112 8790 105 4056 165	
A0743+74																	
N2444 V117		13.90 .09	12.9 15.2	.35 13.43 .35	1.00 .04	.050 .04	1.03 .02	.054 .02	.87 .43						3997 0 1 50	3994 -3	
N2445 V117		13.6 .13	13.6 14.8	.35 14.8	.065 .05	.000 .05	.065 .05	.000 .05									
A0743+59				.35													
A0744+28				.37											6492 1 1 10 8233	6588 96 8174	
A0744+74				.40											1 1 14 4068 1 3 33	-59 4233 165	
N2466				.68													
A0745+56A		15.8 .15		.34	.85 .06	.13 .07									5161 0 1 43 10608	4890 -271 10688	
A0745+56B		15.3 .15		.34	.65 .06	-.08 .07									0 1 165	80	
N2441	12.7 12.64	13.0 .15	14.5	.40 12.53 .35	.80 .06				.68						3623 0 1 81 8520 0 1 92	80 3782 159 8493 -27	
A0746+34																	
A0747+30				.35												4258	
A0748+74				.40											1 1 15	-46	
A0751+55				.33												165	
N2470				.49											6104 0 2 43	6182 78	
I2209		14.30 .13	13.3 14.3	.34 13.89	.055 .05	-.06 .05	.053 .06	-.19 .05	.45 -.13						1545 0 1 95	-170 1646 101	

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log D ₀ (12)	Log A _e m.e. (13)	
A0752+39 MK382	7 52.05	39 19.1	180.98	40.4						.93	.05	.92		
N2460	5.74	-16.1	28.57	-33.3	.SAS1..	1	W060V	S G	3	1.46	.11	1.44	0.85	
N2468	7 52.60	60 29.0	156.71	34.2	S 4 T	5*	3.2		4	.042	.036	1.48	.04	
	8.55	-16.2	31.35	-12.9	.LA..*	-2	P048C			1.11	.25	1.05		
N2469	7 54.01	56 29.7	161.38	35.5			1.5			.042	.044	1.09		
	8.05	-16.4	31.39	-16.7	.S..4P*	4	P048C			1.03	.14	1.00		
N2474	7 54.01	56 48.9	161.01	35.4			1.5			.050	.050	1.03		
	8.09	-16.4	31.41	-16.4			.79			.00	.00	.79		
N2474	7 54.13	52 59.6	165.47	36.5	.E.0...	-5	P048C			.050	.050	.84		
	7.70	-16.4	31.15	-20.1			1.2							
N2475	7 54.16	52 59.8	165.47	36.5	.E.1...	-5	P048C			.90	.00	.90		
	7.70	-16.4	31.16	-20.1			1.4			.050	.050	.95		
A0754+58 D 48	7 54.80	58 10.6	159.42	35.1	.SB.9..	9	P048N			1.38	.44	1.28		
N2484	8.24	-16.5	31.57	-15.1	SX	8*	1.9			.046	.045	1.30		
	7 55.15	37 55.4	182.68	41.6	.L...*	-2*	P048N			1.20	.20	1.15		
N2487	6.65	-16.4	28.83	-24.5			1.8			.071	.071	1.19		
	7 55.3	25 16	196.30	47.4	.SBR3..	3	P048N			1.44	.08	1.43		
	6.06	-16.4	25.18	-46.3			2.4			.039	.038	1.46		
A0756+33	7 56.0	33 3	188.08	43.8	.S..4..	4	P048N			1.28	.52	1.16		
	6.40	-16.5	27.74	-39.0			1.6			.046	.045	1.19		
A0756+16	7 56.5	16 34	205.24	53.4	.SAS5..	5	P048N			1.19	.04	1.18		
	5.72	-16.6	22.22	-54.2			1.9			.039	.038	1.21		
N2493	7 57.0	39 58	180.49	41.3	.LB....	-2	P048N			1.39	.00	1.39		
	6.75	-16.7	29.64	-32.4			2.4			.051	.058	1.43		
N2495	7 57.18	39 58.5	180.49	41.3			.56			.20	.51			
MK383	6.75	-16.7	29.68	-32.4			.042			.045				
N2500	7 58.14	50 52.6	168.01	37.8	.SBT7..	7	P200V	SI *A	2	1.46	.03	1.46	1.1	
	7.49	-16.9	31.57	-22.0	S 7	7	4.3		3VS	.033	.026	1.68	.05	
N2523A	7 58.20	74 11.3	140.47	31.1	.SB55*.	5	P048C			1.10	.16	1.06		
	11.80	-17.1	30.98	.4			1.6			.039	.038	1.09		
A0758+61	7 58.3	61 31	155.49	34.6	.SA.6..	6	P048N			1.26	.28	1.19		
	8.65	-17.0	32.04	-11.8			1.8			.039	.038	1.22		
N2507	7 58.79	15 51.0	206.19	54.9	.S..0P.	0	P048C			1.40	.08	1.39		
	5.69	-16.8	22.44	-54.5			2.3			.042	.038	1.43		
N2514	8 0.00	15 57.1	206.21	55.2	.SBS4..	4	P048C			1.15	.01	1.15		
	5.69	-17.0	22.75	-54.3			1.9			.038	.038	1.18		
N2512	8 0.14	23 32.0	198.52	49.9	.SBR3..	3	P048N			1.22	.15	1.18		
MK384	5.98	-17.0	25.62	-47.5			1.9			.039	.038	1.21		
N2517	8 0.4	-12 11	232.28	107.0	.LX50*.	-2	P048C			.89	.14	.86	*	
	4.74	-17.0	9.72	-73.2			1.5			.075	.100	.96		
A0800+25 MK385	8 0.45	25 14.6	196.76	49.0										
I0492	6.04	-17.1	26.27	-45.9	.SBS4*.	4	P048C			1.11	.02	1.11		
	8 2.62	26 18.7	195.81	49.0			1.8			.039	.038	1.14		
N2525	6.08	-17.3	27.08	-44.7	.SBS5..	5	W100V		1	1.46	.15	1.42	*	
	8 3.26	-11 17.1	231.86	104.7	SXSP	3*	3.6	S P A *	3ES	.033	.025	1.48		
I2226	4.77	-17.3	10.79	-72.3	.SX.2..	2	P048N			1.13	.04	1.12		
	8 3.4	12 41	209.81	59.4			1.8			.039	.038	1.16		
A0804+39 MK622	5.57	-17.4	22.17	-56.7						.83	.00	.83		
	8 4.2	39 9	181.76	43.2						.050	.050			
	6.68	-17.6	30.83	-32.7										
N2521	8 4.75	57 55.0	159.75	36.5	.LA...P	-2	P048C			1.17	.22	1.12		
	8.13	-17.7	32.89	-15.0			1.7			.071	.071	1.16		
A0804+04	8 4.9	4 39	217.69	69.5			.70			.00	.00	.70		
	5.30	-17.6	18.97	-63.0			.075			.100				
A0805+76	8 5.0	76 35	137.83	30.9	.SB.7..	7	P048N			1.37	.20	1.33		
	12.87	-18.0	30.98	2.9			2.1			.039	.038	1.36		
A0805+72 MK 14	8 5.36	72 56.5	142.02	32.0						1.03	.09	1.01		
N2532	11.18	-18.0	31.68	-6						.071	.071			
	8 7.05	34 6.3	187.61	46.1	.SXT5..	5	P200V			1.34	.07	1.33		
	6.41	-17.9	30.24	-37.2			4.0		4VS	.033	.028	1.36		
N25238	8 7.18	73 42.8	141.10	31.9	.SAS3*/	3	P200V			1.36	.74	1.18		
	11.44	-18.2	31.67	.2			3.4			.037	.034	1.22		
A0807+46 D 49	8 7.58	46 36.8	173.21	40.9	.I..9..	10	P048N			1.27	.04	1.26		
N2535	7.12	-18.0	32.65	-25.5	I	8*	2.1			.039	.038	1.27		
	8 8.22	25 21.4	197.29	51.2	.SAR5P.	5	P200C			1.47	.23	1.41	*	
	6.03	-18.0	27.96	-45.1			3.8		3 S	.035	.031	1.44		
N2536	8 8.26	25 19.8	197.32	51.2	.SBT5P.	5	P200C			.96	.15	.93		
	6.03	-18.0	27.96	-45.1			2.9			.038	.035	.96		
N2534	8 8.96	55 49.4	162.26	37.8	.E.1.SP	-5*	P048C			1.23	.06	1.21		
MK 85	7.87	-18.2	33.45	-16.8			2.0			.050	.050	1.26		
N2523	8 9.26	73 43.8	141.05	32.0	.SBR4..	4	P200V	R FG	3	1.48	.18	1.44	1.10	
	11.41	-18.5	31.81	.2	SB2	1	4.2		03 S	.032	.027	1.47	.04	
N2543	8 9.71	36 24.4	185.16	45.6	.SBS3..	3	W060V			1.40	.22	1.35		
	6.51	-18.2	31.31	-34.9			2.9		4VS	.035	.030	1.38		
N2537	8 9.71	46 8.7	173.82	41.4	.IBS9P.	10	W100V	I A	2	1.22	.04	1.21	*	
MK 86	7.07	-18.3	32.96	-25.8	S *		3.2			.037	.030	1.22		
N2537A	8 10.15	46 8.8	173.82	41.5	.SBT5..	5	W100V			.87	.01	.87		
	7.07	-18.3	33.03	-25.8			2.5			.038	.036	.90		
I2233	8 10.46	45 53.6	174.13	41.7	.SB57*/	7	W082C			1.67	.88	1.46	1.05	
	7.05	-18.4	33.06	-26.0			3.1			.033	.027	1.48	.05	
N2541	8 11.03	49 13.0	170.19	40.5	.SAS6..	6	P200V	S AF		1.82	.27	1.76	1.33	
	7.28	-18.4	33.48	-22.9	S 7	7	4.8		2VS	.033	.025	1.78	.03	
N2545	8 11.31	21 30.5	201.65	54.7	RSBR2..	2	W100V	DSP*G		1.35	.22	1.30	0.85	
	5.88	-18.4	27.33	-48.2	S 3 T -*		3.3	S P*FG*	4VS	.035	.031	1.33	.06	
A0811+58	8 11.63	58 28.3	159.07	37.2	.E.2...	-5	P048N			1.10	.09	1.08		
	8.13	-18.6	33.78	-14.1			1.7			.071	.071	1.13		
N2523C	8 12.09	73 28.4	141.30	32.3	.E.5..*	-5*	P048C			1.25	.26	1.19		
	11.26	-18.8	32.06	.0			1.8			.050	.050	1.25		
A0813+70 D 50	8 13.72	70 52.3	144.29	33.2	.I..9..	10	P200V			1.88	.09	1.86		
	10.36	-18.9	32.68	-2.4	I	8	5.0			.040	.028	1.88		
A0814+21	8 14.5	21 50	201.60	55.4	.SBT5..	5	P048N			1.37	.08	1.35		
	5.88	-18.8	28.13	-47.5			2.2			.039	.038	1.38		
N2554	8 14.9	23 37	199.72	54.2	.S..0P.	0	P048N			1.53	.12	1.50		
	5.95	-18.8	28.83	-45.9			2.5			.050	.050	1.54		
N2549	8 14.95	57 57.6	159.67	37.8	.LAR0./	-2	P200V	D GK	3	1.62	.45	1.51	0.80	
	8.05	-19.0	34.24	-14.5	E 6		4.2		5	.038	.031	1.55	.04	
N2552	8 15.68	50 10.0	169.10	40.9	.SAS9*.	9	P200V	SI *A		1.50	.16	1.46	1.25	
	7.32	-19.0	34.29	-21.7	I 9	8	4.3		2VS	.038	.031	1.48	.04	
A0815+20	8 15.7	20 55	202.68	56.5	.S..2*/	2*	P048C			1.22	.45	1.11		
	5.84	-18.9	28.07	-48.2			1.6			.071	.071	1.14		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _L N _H N ₀ (24)	α _L α ₀ (25)	Log S _H N _L A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
A0752+39		*		.33	*	*								10132 0 1 220	10128 -4	
N2460	12.7	12.60	12.3	.34	0.92	0.36	0.98	0.42	.81					0 1 220	1543	
N2468	12.42	.07	14.5	.33	.02	.04	.03	.03	.27					0 1 50	101	
N2469				.33											81	
N2474				.33											83	
N2475				.33											64	
A0754+58				.33								.89		5019	5083	
N2484				.33						2.37	.77	2 .02		0 1 68	64	
N2487				.35						7 4 1	.62*			1094	1183	
A0756+33				.33										2 0 9	89	
A0756+16				.38										12842*	12830	
N2493				.32										0 2 26	-12	
N2495				.32											-76	
N2500	12.6	12.20	13.2	.32	0.60	-.25	0.59	-.22	.52			1.38		4878	4760	
N2523A	12.28	.08	14.3	.39	.03	.05	.03	.05	-.31			1 .01	1.26	1 1 9	-118	
A0758+61				.34										8339	8337	
N2507				.37										0 1 220	-2	
N2514				.37										499	552	
N2512		*		.34	*	*								1 1 30	53	
N2517		13.25	12.2	.76	0.95	0.49	*	*							163	
A0800+25				.34												
I0492				.33												
N2525	12.2	12.20	14.0	.69	0.65	0.04	*	*	.45			.91		8041	7964	
I2226	12.16	.09		.37	.03	.05			-.10			1 .01	2.91	0 1 220	-77	
A0804+39				.31										1579*	1348	
N2521				.32										1 1 14	-122	
72212				.42										4856	4734	
A0804+04				.40										1 1 14	-122	
A0805+76				.38	*	*								4773	4688	
A0805+72		*		.38	*	*								0 1 220	-85	
N2532		13.0	14.4	.31	.62	.06			.50			.65			-233	
N2523B		.15		.38	.06							1 .01	2.33	841	7964	
A0807+46				.30										0 1 220	-77	
N2535		13.1	14.7	.32	0.52	.04	*		.38			.74				
V 9		.1		.32	.04							1 .01		9125	8952	
N2536		14.7	14.0	.32	.58	.06			.45			.94*	1.65*	0 1 46	-173	
V 9		.15		.31	*	*						2 .01		3135	3292	
N2534		*		.31	*	*								0 1 95	157	
N2523	12.7	12.65	13.6	.38	0.70	0.19	0.90	0.28	.56					5245*	5211	
N2543	12.45	.09	14.4	.30	.04	.05	.04	.05	.09					1 1 26	-34	
N2537	12.2	12.35	13.2	.30	0.66	-.11	*	*	.58						160	
V138	12.16	.06	12.01	.30	.02	.04			-.17					2255	2284	
N2537A		13.5	14.2	.30	0.50	0.00	0.50	0.03						1 0 10	29	
V138		.1	14.5	.30	.03	.04	.1	.05						4094	4016	
I2233				.30	.03	.04	.1	.05						3 3 7	-78	
N2541	12.7	12.25	14.4	.30	0.50	-.24	0.54	-.12	.38					4139	4061	
N2545	11.85	.08	15.5	.30	.03	.03	.02	.03	-.33			1.72		0 2 16	-78	
A0811+58	13.0	13.20	12.9	.32	0.80	0.17	0.90	*	.66			2 .01	.53	3549	3625	
N2523C	12.99	.08	14.2	.32	.04	.05	.03	.07	.07					0 1 105	76	
A0813+70				.38										3448	3608	
72223		11.27	15.3	.36	.52	.07		.41						0 1 60	160	
A0814+21		.11	10.82	.31												
N2554				.31										411*	438	
N2549	12.5	12.04	11.5	.31	0.94	0.55	0.99	0.58	.82					0 5 18	27	
N2552	12.12	.07	13.9	.31	.02	.06	.03	.03	.45							
A0815+20	12.5	12.8	14.7	.31	0.59	-.20	0.57	-.18	.48			1.01		7895	7984	
	12.25	.1		.31	.04	.05	.03	.04	-.28			1 .01	1.68	0 1 120	89	
														564	606	
														2 1 8	42	
														3192	3094	
														0 1 150	-98	
														7895	7984	
														0 1 120	89	
														158	158	
														5 1 5	147	
														4163	-97	
														0 1 150	-88	
														1082	1168	
														0 1 75	86	
														511	557	
														1 0 17	46	
														4826	4724	
														0 1 70	-102	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec (3)	L B (4)	SGL 100P (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log A _e m.e. (14)
N2544	8 15.91	74 8.7	140.46	32.3	.SBT0*	0	P048C			1.03	.09	1.01	
MK 87	11.45	-19.3	32.17	.8			1.5			.050	.050	1.06	
N2557	8 16.3	21 36	202.01	56.1	.LB....	-2	P048N			1.16	.05	1.15	
	5.87	-19.0	28.44	-47.5			1.8			.042	.045	1.19	
N2566	8 16.6	-25 20	245.55	146.4	.SBR2*	2*	P048N			1.49	.19	1.44	
	4.28	-18.9	5.88	-68.1			2.4			.039	.038	1.57	
A0816+21	8 16.8	21 16	202.41	56.5						1.22	.23	1.17	
	5.85	-19.0	28.44	-47.7						.042	.045		
N2565	8 16.87	22 11.4	201.43	55.8	.RSB.4*	4	P048C			1.28	.33	1.20	
MK386	5.89	-19.1	28.77	-46.9			1.8			.039	.038	1.23	
N2560	8 17.0	21 8	202.57	56.7	.S..0..	0	P048N			1.24	.56	1.10	
	5.85	-19.1	28.43	-47.8			1.5			.039	.038	1.14	
A0817+21	8 17.4	21 2	202.72	56.9	.SA.8..	8	P048N			1.23	.03	1.22	
	5.85	-19.1	28.49	-47.9			2.0			.046	.045	1.24	
N2562	8 17.48	21 17.4	202.45	56.7	.L...*	-1*	P048C		3*	1.14	.16	1.10	
	5.85	-19.1	28.59	-47.6			1.7			.051	.054	1.14	
N2563	8 17.68	21 13.6	202.54	56.8	.L...*	-2*	P048C		3	1.37	.12	1.34	
	5.85	-19.1	28.61	-47.7			2.2			.067	.060	1.38	
A0818+16	8 18.0	16 48	207.22	60.6	.PSB53..	3	P048N			1.08	.28	1.02	
	5.69	-19.2	27.05	-51.3			1.5			.039	.038	1.05	
N2550	8 18.83	74 10.3	140.37	32.5	.S..3*	3*	P048C			1.07	.39	.98	
	11.40	-19.6	32.36	.9			1.3			.050	.050	1.02	
N2578	8 19.05	-13 9.4	235.56	112.8	.SBR0P.	0	W100V			1.38	.23	1.33	
	4.73	-19.2	13.08	-69.0			3.3		3 S	.059	.054	1.40	
N2551	8 19.21	73 34.6	141.05	32.7	.SAS0..	0	L036V		3*	1.28	.15	1.24	
	11.16	-19.6	32.53	.3		5*	2.3		D3	.036	.032	1.28	
A0819+74	8 19.25	74 35.7	139.88	32.4	.PSB57*	7	P048N			1.17	.00	1.17	
D 51	15.57	-19.7	32.29	-1.3	SB	8*	1.9			.039	.038	1.20	
N2577	8 19.8	22 43	201.13	56.3	.L...*	-3*	P048N			1.32	.20	1.28	
	5.90	-19.4	29.59	-46.1			2.0			.071	.071	1.32	
N2575	8 19.8	24 27	199.24	55.0	.SAT6*	6	P048N			1.39	.06	1.38	
	5.97	-19.4	30.16	-44.6			2.3			.039	.038	1.40	
A0820+22	8 20.2	22 49	201.05	56.3	.SX.5*	5	P048N			1.44	.17	1.40	
	5.90	-19.5	29.71	-46.0			2.3			.039	.038	1.43	
N2583	8 20.7	-4 51	228.46	92.5	.E..1..	-5	P048C			.84	.00	.84	
	5.00	-19.5	17.80	-65.9			1.6			.075	.100	.91	
I2338	8 20.7	21 30	202.52	57.5	.SXS6P.	6	P200C			.79	.03	.80	
	5.85	-19.5	29.37	-47.1			2.7			.039	.038	.80	
I2339	8 20.7	21 30	202.52	57.5	.SBS5P.	5	P200C			1.07	.22	1.02	
	5.85	-19.5	29.37	-47.1			3.0			.039	.038	1.05	
I2341	8 20.8	21 36	202.42	57.4	.L...*	-3*	P048N			1.20	.32	1.13	
	5.86	-19.5	29.43	-47.0			1.7			.071	.071	1.17	
A0821+25	8 21.2	25 51	197.81	54.5									
MK624	6.02	-19.6	30.90	-43.3									
N2582	8 22.4	20 30	203.76	58.8	.PSXS2..	2	P048N			1.10	.00	1.10	
	5.82	-19.7	29.39	-47.7			1.8			.039	.038	1.13	
I2363	8 22.08	19 36.8	204.75	59.6	.SBS4*	4	P048C						
	5.78	-19.8	29.18	-48.4									
N2550A	8 23.01	73 54.9	140.58	32.8	.SATS..	5	P048N			1.24	.08	1.22	
	11.22	-20.1	32.70	.7			2.0			.050	.050	1.25	
A0823+21	8 23.2	21 37	202.63	58.1	.S..8*	8*	P048N			1.05	.40	.96	
	5.85	-19.8	29.95	-46.6			1.3			.039	.038	.98	
A0824+55	8 24.30	55 52.6	162.14	39.8						.39	.00	.39	
MK 88	5.85	-20.0	35.60	-15.9						.050	.050		
N2595	8 24.79	21 38.8	202.74	58.5	.SXR5..	5	P048C			1.49	.11	1.47	
	5.85	-20.0	30.31	-46.4			2.4			.046	.041	1.49	
A0825+42	8 25.12	42 1.2	179.16	46.1	.I..9..	10	P048F			1.31	.26	1.25	
D 52	6.74	-20.1	35.21	-28.5		9	1.9			.039	.038	1.26	
N2601	8 25.2	-67 57	282.01	196.3	.LA...*	-2	S030V		3V5	1.29	.12	1.26	
	.71	-19.7	-16.90	-35.6			2.2			.224	.120	1.38	
I2378	8 25.4	30 36	192.74	52.4						.93	.00	.93	
	6.19	-20.1	33.11	-38.7						.075	.100		
A0825+17	8 25.7	17 38	207.14	62.2	.S...P.		P048N			1.12	.10	1.09	
	5.71	-20.1	29.07	-49.6			1.7			.039	.038	1.12	
A0825+52	8 25.93	52 14.5	166.61	41.6	.L...0P*	-2*	PG48C			.75	.27	.69	
MK 89	7.41	-20.2	35.94	-19.2			1.1			.050	.050	.73	
A0826+52	8 26.26	52 51.9	165.81	41.4	.S..R..*		P048N			.93	.05	.91	
MK 90	7.46	-20.2	35.98	-18.6			1.4			.039	.038	.94	
A0827+52	8 27.0	52 28	166.33	41.6	.SXS4..	4	P048N			1.11	.06	1.10	
	7.42	-20.3	36.10	-18.9			1.7			.039	.038	1.13	
N2598	8 27.13	21 39.4	202.94	59.2	.SB..1*	1	P048C			1.11	.39	1.02	
	5.85	-20.3	30.83	-46.1			1.4			.037	.035	1.05	
A0828+52	8 28.75	52 46.6	165.94	41.8						1.12	.00	1.12	
MK 91	7.44	-20.5	36.36	-18.5						.075	.100		
A0828+75	8 28.81	75 18.6	138.86	32.7						.74	.33	.66	
MK 15	11.68	-20.8	32.69	2.2						.042	.045		
I0509	8 29.0	24 10	200.33	57.7	.SATS..	5	P048N			1.28	.05	1.27	
	5.93	-20.5	32.05	-43.8			2.1			.039	.038	1.29	
A0829+19A	8 29.1	19 23	205.61	61.6	.SXT5P.	5	P200C			1.28	.23	1.23	
	5.76	-20.5	30.46	-47.7			3.4			.046	.045	1.25	
A0829+19B	8 29.2	19 22	205.64	61.7	.CE..0.P*	-6*	P200C						
	5.76	-20.5	30.48	-47.7									
N2599	8 29.26	22 44.0	201.95	58.9	.SA..1..	1	P048N			1.38	.00	1.38	
MK389	5.88	-20.5	31.65	-44.9			2.3			.046	.045	1.41	
A0829+66	8 29.55	66 21.0	149.31	36.3	.I..9..	10	P048N			1.23	.05	1.22	
D 53	9.08	-20.7	34.95	-6.1		9	2.0			.039	.038	1.24	
N2591	8 30.71	78 11.9	135.57	31.6	.S..5P*	5*	P048C			1.50	.61	1.35	
	13.24	-21.1	31.90	4.9			2.0			.037	.035	1.38	
N2613	8 31.18	-22 48.0	245.37	137.7	.SAS3..	3	W100V	S GK	3	1.86	.53	1.74	
	4.42	-20.6	10.06	-65.7	S 3	3	4.0		4 S	.028	.021	1.82	1.30
N2612	8 31.4	-12 59	237.11	113.6						1.50	.65	1.35	
	4.75	-20.7	15.69	-66.0						.075	.100		
A0832+66	8 32.17	66 24.3	149.18	36.5	.S..1*	1*	P048C						0.3
MK 93	9.06	-21.0	35.19	-5.9									.1
A0832+46	8 32.18	46 39.9	173.56	45.1	.S...S.		P048C						0.25
MK 92	6.97	-20.9	36.86	-23.8									.095
N2608	8 32.26	28 38.8	195.46	55.4	.SBS3*	3*	W100V	SIP*AF*	4	1.40	.19	1.35	
	6.09	-20.9	34.05	-39.6			3.4			.040	.037	1.38	
A0832+30	8 32.47	30 42.3	193.07	54.0	S S					.79	.18	.75	
MK390	6.17	-20.9	36.81	-37.8						.075	.100		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _H m.e. (28)	V ₀ ΔV (29)		
N2544		*		.38	*	*									2787	2948	
N2557				.31											0 2 39	161	
N2566				1.25											4969	4871	
A0816+21				.31											0 1 70	-98	
N2565				.31											5551	5451	
N2560				.31											0 1 120	-100	
A0817+21				.31											3610*	3514	
N2562		13.85		.31	1.00	*		.86							0 3 46	-96	
N2563		.07	14.0	13.37	.02										4928	4827	
A0818+16		13.35	12.3	.31	1.02	0.61	1.04	0.65	.90						0 1 70	-101	
		.08	14.8	12.92	.02	.06	.02	.04	.55						4963	4863	
				.32											0 1 50	-100	
															4642*	4542	
															0 2 39	-100	
N2550				.34												-122	
N2578		13.40	13.1	.59	0.97	0.45	1.01	0.50								161	
N2551	13.1	.09	14.5	.37	.03	.04	.04	.04								-241	
A0819+74	13.16	13.05	12.0	.37	1.01	.03	0.99	.05	.88						2216	2375	
		.09	13.9	12.54	.03										0 1 74	159	
				.38											3524	3687	
N2577				.30								.58			1 0 20	163	
												1.01			2148	2054	
															0 1 70	-94	
N2575				.30												-85	
A0820+22				.30												-93	
N2583		14.50		.44	0.99	0.50	*	*								-213	
I2338		.09	13.7	.30	.04	.04						.59*			5364*	5264	
I2339				.30								1.01			1 1 44	-100	
															5219	5119	
I2341				.30											0 1 70	-100	
A0821+25				.29											4846	4747	
N2582				.30											0 1 150	-99	
I2363				.30											8455	8377	
N2550A				.37											0 1 100	-78	
															4477	4372	
															0 2 64	-105	
A0823+21				.30												-109	
																160	
A0824+55		15.2		.30	.62	-.07									4374	4275	
I2 14		.15		.29	.06	.07									0 1 105	-99	
N2595		*		.29	*	*									9186	9260	
A0825+42				.28											0 5 25	74	
															4263*	4163	
															0 3 37	-100	
N2601				.88								.71			393	396	
												1.01			1 0 10	3	
															3234	2954	
I2378				.28											0 1 49	-280	
A0825+17				.30											14970	14915	
															0 1 120	-55	
A0825+52		15.25	11.5	.29	0.54	-.35	0.56	-.40	.43							-119	
A0826+52		.09	13.2	.29	.04	.04	.04	.04	-.41						1717	1773	
A0827+52				.29								.60			1 2 25	56	
												1.01			4271	4330	
															0 3 38	59	
N2598		14.7		.29	1.01	.07									5084	5141	
A0828+52		.15	14.1	.29	.06	.07									1 1 19	57	
A0828+75				.38												-100	
I0509				.28											5127	5185	
A0829+19A				.29											0 3 38	58	
															6438	6604	
															0 2 39	166	
															5482	5394	
															1 1 10	-88	
															11167	11056	
A0829+19B				.29											0 1 109	-111	
N2599				.28												-111	
A0829+66				.33											11242	11131	
N2591				.40											0 1 66	-111	
															4532	4437	
															0 2 42	-95	
N2613	11.3	11.35	13.3	.78	0.93	0.36	1.01	0.46	.65							125	
N2612	10.97	.09	14.2	10.13	.05	.05	.03	.03	.11			1.15			1712*	178	
				.50								1.03	3.51		1 2 32	1444	
A0832+66		15.8	12.8	.33	0.75	-.25	0.65	-.28								-268	
A0832+46		.2	11.4	.28	.05	.05	.04	.04							5263	-242	
		14.7			.05	.05	.04	.04							2 39	5388	
		.2			.50	.2	0.53	-.40							0 2 39	125	
N2608	12.9	12.80	13.0	.27	.05	.1	.04	.05							4335	4361	
A0832+30	12.80	.07	14.2	12.36	.03	.04	.02	.03	.02						0 1 45	26	
				.27											2119	2053	
															0 1 100	-66	
															7147	7092	
															0 1 220	-55	

NGC IC, A Mk, DDO	Coordinates				Classification					Diameters			
	RA (1950) 100P (1)	Dec 100P (2)	L B (3)	SGL SGB (4)	Rev. type DDO type (5)	T L (6)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(DO) Log Do (12)	Log Ae m.e. (13)
N2616	8 33.03	-1 40.7	227.23	89.7						1.10	.00	1.10	
A0834+51A	5.10	-20.9	22.06	-61.6	.SX.8..	8	P048N			.071	.031		
	8 34.0	51 49	167.10	43.0			2.3			1.44	.11	1.41	
	7.32	-21.1	37.19	-19.0						.039	.038	1.43	
I0511	8 35.36	73 39.8	145.58	33.7	.L...S.	-25	W060V			1.23	.42	1.13	
	10.87	-21.5	33.60	.8			2.4			.042	.045	1.18	
A0835-02	8 35.4	-2 17	228.12	91.4						.62	.00	.62	
	5.08	-21.2	22.26	-61.4						.042	.045		
N2623	8 35.43	25 55.8	198.85	58.1	.P.....		P200C			.79	.08	.77	*
	5.98	-21.2	33.98	-41.5			2.6			.050	.050	.80	
N2625	8 35.5	19 53	205.69	63.0						.61	.06	.60	
MK625	5.77	-21.2	32.05	-46.4						.050	.050		
A0835+53	8 35.9	53 38	164.81	42.4	.SB....		P048N			1.37	.31	1.30	
	7.45	-21.3	37.40	-17.3			2.0			.046	.045	1.32	
N2614	8 37.42	73 9.4	141.11	34.1	.SAR5..	5	M082C			1.44	.09	1.42	
	10.64	-21.7	33.89	.4						.047	.044	1.45	
N2642	8 38.24	-3 56.6	230.05	95.2	.SBR4..	4	W100V			1.36	.01	1.36	*
	5.03	-21.5	22.01	-61.6	SX3	1	3.5	SX *F	4 S	.043	.032	1.39	
N2639	8 40.06	50 22.2	168.88	44.6	RSAR1*5	1*	W100V		3*	1.30	.18	1.26	*
	7.16	-21.8	38.19	-19.9	S 0		3.2	E6P*K	4VS	.053	.042	1.29	
N2649	8 40.97	34 53.8	188.46	53.2	.SXT3*.	3	P048C			1.27	.01	1.27	
	6.31	-21.8	37.23	-33.3			2.1			.037	.036	1.30	
A0841-20	8 41.0	-20 29	244.82	131.5						1.50	.26	1.44	
	4.52	-21.7	13.26	-63.8						.075	.100		
N2629	8 41.01	73 10.1	140.97	34.4	.LAR0*.	-2	P048C			1.42	.10	1.39	
	10.55	-22.2	34.20	.6			2.3			.071	.071	1.44	
A0842+37	8 42.4	37 7	185.75	52.2						.89	.00	.89	
MK626	6.40	-22.0	37.87	-31.3						.042	.045		
I2389	8 42.55	73 43.4	140.32	34.2	.SBS3*.	3	W060V			1.22	.65	1.07	
	10.73	-22.2	34.06	1.1			2.2			.050	.050	1.11	
N2633	8 42.57	74 17.0	139.69	33.9	.SBS3..	3	W060V	B P*F	5	1.41	.17	1.36	0.75
	10.94	-22.3	33.87	1.6	S83P		3.0	R P FG	4VS	.035	.031	1.40	.04
N2634	8 42.94	74 9.1	139.83	34.0	.E.1*.	-5*	W060V			1.34	.02	1.34	
	10.88	-22.3	33.94	1.5			3.0			.066	.055	1.40	
N2636	8 42.97	73 51.4	140.16	34.1	.E.0.*.	-5*	W060V			.70	.00	.70	
	10.77	-22.3	34.04	1.2			1.8		4	.050	.050	.76	
N2663	8 43.14	-33 37.1	255.69	157.6	.E.3...-	-5	P048C						*
	4.04	-21.9	5.65	-59.3									
N2634A	8 43.15	74 7.4	139.85	34.0	.SBS4*.	4	P048C			1.29	.59	1.15	
	10.46	-22.3	33.96	1.5			1.6			.045	.042	1.18	
A0843+36	8 43.3	36 37	186.41	52.7									
MK627	6.38	-22.1	37.98	-31.6									
A0843+49	8 43.7	49 44	169.69	45.4	.L...S.	-25	P048N			1.20	.26	1.14	
	7.09	-22.2	38.79	-20.2			1.7			.066	.082	1.18	
N2656	8 44.1	54 3	164.17	63.3	.LA.-P*	-3	PG48C			1.19	.00	1.19	0.85
	7.41	-22.2	38.57	-16.4			2.3			.075	.100	1.23	.05
A0844+70	8 44.56	70 20.9	144.15	35.8	.S..3*.	35	P048C						0.30
MK 95	9.70	-22.4	35.29	-1.8									0.20
N2646	8 45.00	73 38.9	140.34	34.3	.LBR0*.	-2	W060V		3	1.24	.03	1.23	0.75
	10.65	-22.5	34.25	1.1			2.8		3 S	.040	.040	1.28	.07
N2650	8 45.09	70 29.1	143.98	35.8	.SBR3*.	3	P048C			1.27	.11	1.24	
	9.72	-22.5	35.29	-1.7			2.0			.039	.038	1.27	
N2654	8 45.18	60 24.4	156.13	40.4	.SB.2*/	2	P048C		3	1.63	.66	1.48	0.90
	8.02	-22.4	37.81	-10.7	S 2	4	2.2	DS GK		.037	.034	1.51	.06
A0845+46	8 45.57	46 26.1	173.93	47.4									.05
MK 96	6.87	-22.4	39.16	-22.9									0.9
N2672	8 46.52	19 15.6	207.47	66.4	.E.1...-	-5	P200C			1.41	.03	1.40	0.70
	5.72	-22.4	34.26	-45.3	E 1		3.9	E2 K		.048	.042	1.44	.05
N2673	8 46.56	19 15.6	207.48	66.5	.E.0.P.	-5	P200C			1.14	.00	1.14	0.70
	5.72	-22.4	34.27	-45.3			3.4	E1 K		.050	.051	1.18	.06
A0846+65	8 46.57	65 49.5	149.45	38.0									
MK 97	8.75	-22.6	36.75	-5.8									
A0846+72	8 46.88	72 0.1	142.16	35.2									
MK 98	10.09	-22.7	36.93	-3									
A0847+76	8 47.1	76 41	136.88	33.1	.S..6*.	6*	P048N			1.56	.54	1.43	
	11.88	-22.8	33.27	3.9			2.2			.039	.038	1.46	
A0847+61	8 47.42	61 12.5	155.07	40.3						.75	.29	.68	
MK 99	8.09	-22.6	37.92	-9.8						.075	.100		
A0847+57	8 47.82	57 17.7	159.96	42.2									
MK 17	7.66	-22.6	38.68	-13.3									
A0847+29	8 47.9	29 25	195.59	58.4									
MK628	6.06	-22.6	37.55	-37.1									
A0847+73	8 47.96	73 22.7	140.56	34.7						.89	.06	.87	
MK 16	10.49	-22.8	34.54	1.0						.050	.050		
N2676	8 48.0	47 44	172.24	47.1	.L...*.	-2*	P048N			1.17	.04	1.16	
	6.93	-22.6	39.56	-21.6						.050	.050	1.19	
I0520	8 48.35	73 40.8	140.20	34.5	.SXT25.	25	W060V			1.37	.09	1.35	
	10.59	-22.9	34.46	1.2			3.0	SD GK	D3 S	.045	.042	1.39	
N2655	8 49.14	78 24.8	134.93	32.4	.SX50..	0	P200V	E4P*		1.71	.07	1.70	*
	12.82	-23.1	32.69	5.5	S N *		4.8		4VL	.037	.028	1.75	
N2683	8 49.58	33 36.5	190.47	55.9	.SAT3..	3	W100V	S 6	2	1.97	.57	1.84	1.24
	6.22	-22.8	38.76	-33.4	S 2	4	4.2		4 S	.025	.018	1.86	.02
N2681	8 49.96	51 30.2	167.33	45.4	PSAT0..	0	P200V	S K	4	1.58	.04	1.57	0.95
	7.17	-23.2	39.68	-18.2	S 0		4.5		5	.044	.029	1.60	.03
I2421	8 51.28	32 52.2	191.48	56.7	.SAT5..	5	P048C			1.41	.02	1.41	
	6.18	-22.9	38.98	-33.8			2.4			.038	.036	1.43	
N2691	8 51.54	39 43.7	182.68	52.3	.S..15.	15	P048N			1.21	.15	1.18	
MK391	6.48	-23.0	39.95	-28.1			1.8			.039	.038	1.21	
N2685	8 51.67	58 55.5	157.79	41.9	RLB..P.	-2	P200V	D P K	3	1.72	.24	1.67	1.13
	7.78	-23.1	38.89	-11.6	S 3P	4*	4.6	D P K		.045	.032	1.71	.04
N2698	8 53.09	-2 59.4	231.32	96.7	.SA.05.	0	P048C			1.25	.30	1.18	
	5.06	-23.1	25.65	-57.8			1.8			.183	.120	1.22	
N2692	8 53.37	52 15.5	166.29	45.5	.S..1*.	1*	P048C			1.18	.34	1.10	
	7.19	-23.2	40.13	-17.2			1.6			.038	.035	1.13	
N2694	8 53.41	51 31.4	167.25	45.9	.E.1...-	-5	P048C			.52	.04	.51	*
	7.14	-23.2	40.21	-17.9						.050	.050	.55	
N2693	8 53.41	51 32.3	167.23	45.9	.E.3*.	-5*	W060V	E3 K	3	1.34	.11	1.31	0.92
	7.14	-23.2	40.21	-17.9	E P		2.9		3	.048	.046	1.35	.04
N2708	8 53.61	-3 10.1	231.56	97.1	.SAS35.	3	P048C			1.47	.28	1.40	
	5.06	-23.1	25.67	-57.8			2.2			.059	.053	1.43	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m_H m_c (15)	B_T m.e. (16)	m'_e m_{25} (17)	A_B B_T (18)	$(B-V)_T$ m.e. (19)	$(U-B)_T$ m.e. (20)	$(B-V)_E$ m.e. (21)	$(U-B)_E$ m.e. (22)	$(B-V)_T^2$ $(U-B)_T^2$ (23)	$\log S_R$ $N_H N_0 N_+$ (24)	α_- α_+ (25)	$\log S_H$ $N_H A_{21}$ (26)	RI HI (27)	V $N_H N_0$ m.e. (28)	V_0 ΔV (29)	
N2616		13.6 .15		.36	.99 .06	.49 .07				2.04 2 2 3	.58* 1.35					
A0834+51A				.28											645 0 1 86	-204 698 53
I0511				.36												158
A0835-02				.36											1940 0 1 46	1734 -206
N2623		14.4 .1	13.0	.27 14.03	0.61 .03	0.15 .03	*	*	.50 .07						5435 0 1 40	5355 -80
V 79				.28												
N2625				.28											4525 0 1 100	4415 -110
A0835+53				.28												62
N2614				.36												156
N2642	12.7 12.54	*		.36	*	*	*	*							4439 0 1 64	4226 -213
N2639	12.4 12.67	12.65 .09	13.5	.27 12.19	0.89 .04	0.37 .05	*	*	.77 .29						3314 0 1 75	3359 45
N2649				.26												
A0841-20				.60												-35
N2629				.36												-264
A0842+37				.26												156
I2389		14.0 .15	13.3	.36 13.10	.64 .06				.42						3934 0 1 100	3911 -23
N2633	12.6 12.57	12.85 .09	12.1 14.3	.36 12.34	0.97 .04		0.75 .04	.84							2585 0 1 64	2743 158
N2634				.36											2141 0 1 43	2302 161
N2636				.36												160
N2663		*		1.33	*	*	*	*		2.35 2 3 4	.70* .70				2309 0 3 33	159 2020 -289
N2634A				.36												160
A0843+36				.26												3215 0 1 100
A0843+49				.27												3189 -26
N2656		14.45 .09	14.2	.28 13.97	1.15 .05	0.39 .06	1.17 .04	0.44 .04	.96 .39	2.35* 4 1 0	.47*		-3.225		3005 0 1 185	3046 41
A0844+70		15.70 .09	12.7	.34 12.7	0.40 .05	-1.1 .04	0.45 .04	-1.3 .04							13466 0 2 46	13529 63
N2646		12.95 .13	12.2 13.9	.36 12.52	1.00 .05		1.02 .04	.88							3594 0 1 220	3737 143
N2650				.34											3546 0 1 74	3704 158
N2654	12.9 12.62	12.75 .07	12.7 14.1	.29 11.92	0.95 .03	0.54 .05	1.05 .04	0.59 .05	.75 .35						1360 0 1 65	1444 95
A0845+46		15.2 .1	11.7	.26 11.7	0.5 .1	-1.3 .04	0.6 .04	-1.6 .04							7102 0 1 45	7126 24
N2672	12.6 12.20	12.6 .13	12.6 14.6	.26 12.28	0.98 .03	0.57 .03	1.02 .02	0.62 .02	.88 .53						4223 0 1 100	4109 -114
N2673		13.9 .13	12.9 14.6	.26 13.58	0.99 .05	0.52 .06	1.00 .05	0.56 .06	.90 .48						3792 0 1 65	3678 -114
A0846+65				.31											7046 0 3 38	7168 122
A0846+72		*		.35	*	*									3469 0 2 43	3619 150
A0847+76				.38												
A0847+61		16.2 .15		.29	.48 .06	-1.40 .07									3594 0 1 220	171 3693
A0847+57				.28											6825 0 1 95	6905 80
A0847+29				.26											8062 0 2 40	7999 -63
A0847+73		*		.35	*	*									2399 0 2 39	2556 157
N2676				.26											5955 0 1 185	5986 31
I0520	12.8 12.68		14.2	.36												
N2655	11.6 11.07	10.95 .08	14.2 10.49	.39 10.49	0.86 .02	*		.75				1.43 1.01	2.50		1445* 1 2 23	1623 178
N2683	10.8 10.41	10.55 .07	12.2 13.8	.25 9.84	0.89 .02	0.29 .04	0.94 .03	0.41 .03	.73 .14	2 0 0					284 1 4 11	242 -42
N2681	11.3 11.16	11.10 .05	11.3 13.7	.27 10.79	0.80 .01	0.32 .05	0.82 .02	0.36 .04	.72 .27						710 0 2 27	760 50
I2421				.25											4384 1 1 9	4338 -46
N2691		*		.25	*	*									3979 1 2 60	3969 -10
N2685	12.5 11.71	11.90 .05	13.0 14.8	.28 11.51	0.85 .02		0.90 .03	.76				.45 1.01 1.17 2.01	2.13		868 2 4 12	956 88
N2698				.32												
N2692				.27												-211
N2694		15.3 .2	12.8	.26 14.96	1.04 .04	0.65 .06	*	*	.93 .61						5123 0 1 75	5173 50
N2693	12.9 12.63	12.70 .07	12.8 14.1	.26 12.37	0.99 .03	0.53 .06	1.02 .02	0.57 .04	.88 .50						4956 0 1 50	5006 50
N2708				.32												-211

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D0) Log D ₀ (12)	Log A _e m.e. (13)	
A0854+66 MK100	8 54.50	66 39.8	148.16	38.3	.P.....		P048N 1.3			.89 .050	.06 .050	.87 .91	0.35 .05	
N2713	8 54.74	3 6.8	225.67	87.4	.SBT2..	2	W100V	BS *G		1.59	.35	1.51	0.90	
N2716	8 54.99	3 17.0	225.54	87.3	RLBR...	-1	W100V	D *G *	4 S	.031	.025	1.54	.06	
N2701	8 55.44	53 57.9	164.02	44.9	.SXT5*.	5	W060V	I *AF*	4V5	1.25	.09	1.23	*	
A0855+06	8 55.8	6 31.3	222.38	83.0	S 5	3	2.8		3V5	.039	.035	1.27	0.90	
	5.33	-23.4	31.05	-52.3						1.32	.16	1.29	.05	
										.035	.031	1.31		
										.66	.11	.64		
										.050	.050			
N2712	8 56.15	45 6.6	175.65	49.9	.SBR3*.	3*	W100V	S *FG	4	1.46	.23	1.40	1.00	
N2718	8 56.2	-23.5	41.00	-23.1	S 4	1	3.5		3V5	.035	.031	1.42	.04	
N2722	8 56.2	6 30	222.45	83.1	PSXS2..	2	P048N			1.39	.00	1.39		
N2721	8 56.26	-3 30.9	232.28	98.2	.SA.4*.	4	P048C			.046	.045	1.42		
N2719	8 57.13	35 55.5	187.79	55.8	.I..9P\$	10	P200C					1.00		
N2719A	8 57.14	35 55.0	187.81	55.8	.I..9P\$	10	P200C							
N2723	8 57.63	3 22.4	225.83	87.7	.L..0*.	-2*	P048C		3	.075	.100	.99		
A0858+60 MK 18	8 58.03	60 20.9	155.77	41.9			2.5			1.11	.53			
N2735	8 59.7	26 8	200.47	63.6	.SXT3\$P	3	P200C			.037	.034			
N2735A	8 59.7	26 8	200.47	63.6	.I..9*P	10*	P200C							
	5.91	-23.8	39.27	-38.1			2.3							
A0901+51 MK101	9 1.00	51 48.8	166.69	46.8	.S.....		P048N			.97	.02	.96	0.40	
N2726	9 1.04	60 8.0	155.93	42.3	.S..1*.	1*	P048C			.039	.038	.99	.05	
N2744	9 1.83	18 39.8	209.74	70.7	.SBS2*P	2	W100V			1.18	.47	1.07		
N2715	9 1.84	78 17.2	134.74	33.0	.SXT5.. S 5 K	5	W060V	S AF	2	.038	.036	1.10		
N2749	9 2.54	18 30.8	209.99	71.0	.E.3... E 2	-5	W100V	E4 K	3V5	1.25	.17	1.21		
N2750	9 2.8	25 38	201.34	64.7	.SX.5..	5	P048N			1.70	.41	1.60		
N2752	9 2.89	18 32.4	209.99	71.1	.SB.3\$/ S 5	3	P048C	S *G *		.036	.032	1.24	*	
N2742	9 3.64	60 40.9	155.13	42.3	.SASS*.	5*	W060V	S AF		1.03	.42	.94		
N2763	9 4.47	-15 17.9	244.03	120.6	.SBR6P. S 6	6*	W100V	S AF	3 S	.042	.045			
N2765	9 5.0	3 35	226.68	89.1	.L.....	-2	P048N			1.08	.40	.98		
N2756	9 5.4	54 3	163.60	46.1	.S..3..	3	P048N			.039	.038	1.00		
N2764	9 5.43	21 38.8	206.51	68.7	.L...*.	-2*	P048C			.039	.038	1.00		
A0905+06 D 54	9 5.52	6 7.9	224.14	85.7	.S..9.. S	9	P048N			1.30	.06	1.28	0.85	
N2742A	9 5.95	62 27.1	152.82	41.6	.SBS3P\$ S 5	3	P048C			.062	.047	1.32	.05	
N2770	9 6.50	33 19.7	191.58	59.4	.SASS*.	5*	W060V							
N2732	9 6.89	79 23.6	133.43	32.6	.L...*/ S *	-2	W060V	D K						
A0907+22 D 56	9 7.52	-22 48.2	250.66	134.8	.I..9..	10	P048F			1.37	.04	1.36	0.70	
N2775	9 7.68	7 14.5	223.27	84.8	.SAR2..	2	W100V	DS *GK		.039	.035	1.31	.07	
N2768	9 7.75	60 14.5	155.50	43.0	.E.6*.	-5*	W060V	E5 K *		1.10	.04	1.09		
N2748	9 8.01	76 40.9	136.26	34.1	.SA.4... S 5	4	W060V	S *AF	3*	.052	.050	1.12		
N2777	9 8.04	7 24.7	223.14	84.6	.S..2\$.	2\$	P048C			1.65	.10	1.63	1.10	
N2788	9 8.3	-67 44	284.35	192.0	.S...*/		S030V		03 S	.033	.028	1.66	.05	
A0908+66 MK102	9 8.30	46 50.6	173.20	50.8						1.80	.35	1.72	1.30	
A0908-08	9 8.4	-8 42	238.93	108.9	.SXT3\$/ S 5	3	P048C			.054	.036	1.76	.05	
N2776	9 8.93	45 9.6	175.50	51.9	.SXT5.. S 5	5	W100V	S F	2	1.49	.37	1.41		
A0908-14 D 57	9 8.97	-14 50.8	244.37	120.0	.I..9..	10	P048F		2 S	.033	.027	1.44		
A0909+35 D 55	9 9.05	35 44.1	188.42	58.2	.S..9\$.	9\$	P048N							
N2781	9 9.10	-14 36.6	244.19	119.6	.LXR... S 4	-1	W100V	D K	4 S	1.24	.00	1.24	0.75\$	
A0909+74	9 9.58	74 26.4	138.63	35.4	.SXS7.. S 5	7	P200V			.050	.050	1.54	.07	
A0909+79	9 9.7	79 29	133.26	32.7	.S..6*.	6*	P048N			1.46	.03	1.45	*	
N2784	9 10.10	-23 57.9	251.98	136.7	.LAS0*. E 8	-2	W100V	D K		.032	.026	1.47		
A0910+17	9 10.5	17 51	211.64	73.5										
A0910+19 D 58	9 10.55	19 34.7	209.55	71.8	.I..9..	10	P048N							
A0910+35	9 10.68	35 2.2	189.42	59.0	I	9	2.0							
N2782	9 10.90	40 19.3	182.16	55.3	.SXT1P. S 3 NT	1	W100V	SDP*G	4	1.71	.35	1.63	0.95	
	6.39	-24.9	43.68	-25.5			3.8		5	.048	.030	1.70	.04	
										.075	.100	.51		
										1.22	.04	1.21		
										.039	.038	1.22		
										.070	.170	.66		
										.075	.100			
										1.58	.12	1.55	1.00	
										.034	.029	1.58	.02	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _C (15)	B _T m.e. (16)	m _g m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _g (U-B) _g (23)	Log S _R N _H N _H N _H (24)	α ₊ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)			
A0854+66		14.2	11.4	.31	0.70	0.25	0.70	0.30	.58						3615	3740	S	
N2713	12.7	.1	13.3	13.79	.1	.1	.1	.1	.21						0 1 45	125		
N2716	12.36	.13	14.5	11.99	.04	.05	.04	.05	.27						0 2 26	3688		
N2701		13.3	.29	.03	0.86	0.38	*	*	.75						0 1 50	3351		
A0855+06	12.5	12.80	12.8	12.90	.03	.06	0.54	-.03	.33			1.09			0 1 50	-186	P	
ZCG	12.66	.09	13.8	12.39	.04	.04	.03	.03	-.19			1.01	1.45		0 1 13	2401		
N2712				.27											3501	3328		
N2718	12.7	12.70	13.2	.25	0.68	0.09	0.77	0.19	.57						0 1 185	-173		
N2722	12.57	.08	14.3	12.25	.03	.05	.03	.04	.01							1840	1857	P
N2721				.27												0 1 200	17	
N2719				.32													-173	
N2719A				.32													-213	
N2723				.25													-217	P
A0858+60				.28	*	*											3215	
N2735				.24													3185	
ZCG = V 40				.24													0 1 95	
N2735A				.24													3076	P
V 40				.24													3046	
A0901+51		13.85	11.3	.26	0.54	-.04	0.62	0.04	.44			.34					3046	
N2726		.13	13.5	13.54	.05	.05	.04	.04	-.11			1.01	2.17				0 1 95	
N2744				.28													3725	T
N2715		13.8	.25	.06					.32								3539	
N2749	12.1	11.95	14.5	13.38	0.57	*	*	*	.40								0 1 65	
N2750	11.80	.09	14.3	11.24	.03	.03	0.99	0.51	.87								3324	
N2752	13.1	13.00	12.7	.24	0.96	0.06	0.02	.04	.44								3419	T
N2756	12.82	.08	14.3	12.70	.02	.06	.02	.04	.44								0 2 39	
N2742				.24													2615	
N2763	12.5	12.3	13.0	.28	0.62	0.03	0.70	0.08	.50								0 1 185	
N2765	12.38	.1	14.0	11.81	.04	.04	.03	.03	-.06								2694	T
N2765	12.7	12.70	13.2	.40	0.62	-.07	0.67	-.03	.51			.91	2.03				0 1 185	
N2756	12.56	.09	14.2	12.26	.04	.05	.05	.05	-.15			1.01					-81	
N2764				.26													4782	
A0905+06		13.3	13.40	12.4	0.73	0.20	0.73	0.15	.03								4833	P
N2742A	13.34	.06	13.9	.26	.02	.02	.02	.03				.44					51	
N2770				.24													1526	
N2732				.29													1432	
A0907-22				.24													94	PT
N2775	13.0	12.85	11.8	.39	0.97		0.98		.83								3450	
N2768	13.02	.13	13.5	12.27	.05		.04										3332	
N2748				.51													0 1 105	
N2777	11.5	11.20	12.2	.26	0.87	0.38	0.94	0.45	.78								1296	P
N2788	11.18	.07	14.0	10.85	.02	.05	.03	.05	.31								1392	
A0908+46	12.0	10.90	12.9	.28	0.93	*	0.96	0.51	.85								96	
A0908-08	10.96	.07	14.0	10.60	.03	.03	.03	.06	.57								1634	
N2776	12.4	12.4	.37	.73	.06												-252	P
A0909+35	12.41	.15	13.8	11.72	.06												1886	
N2781				.25													1 0 10	
A0909+74				.24													-185	
A0909+79				.24													63	P
N2784				.24													-103	
A0910+17				.24													1131	
N2782				.24													-175	
A0910+35				.24													105	P
N2782	12.4	12.15	12.6	.24	0.66	0.00	0.66	-.03	.56								-44	
A0910+17	11.97	.06	14.6	11.78	.02	.04	.02	.02	-.05			.91	2.51				2023	
N2782				.24													0 1 87	
				.24													182	P
				.24													728	
				.24													1 0 10	
				.24													-271	
				.24													1135	T
				.24													0 1 75	
				.24													965	
				.24													-170	
				.24													1408	P
				.24													1502	
				.24													94	
				.24													1562	
				.24													171	P
				.24													-169	
				.24													1256	
				.24													-282	
				.24													4306	P
				.24													25	
				.24													-231	
				.24													2643	
				.24													17	P
				.24													1805	
				.24													-250	
				.24													1849	
				.24													-32	T
				.24													-250	
				.24													161	
				.24													183	
				.24													435	P
				.24													-273	
				.24													7588	
				.24													-122	
				.24													-113	P
				.24													7165	
				.24													-35	
				.24													2529	
				.24													-8	P
				.24													2537	
				.24													1 4 11	
				.24													-8	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log A _e m.e. (14)
A0911+16	9 11.4	16 57	212.82	74.6	.SAR2..	2	P048N			1.33	.00	1.33	
	5.59	-24.9	38.94	-42.8			2.2			.039	.038	1.36	
A0911+47	9 11.6	47 7	172.76	51.1	.S.....		P048N			1.08	.25	1.02	
	6.72	-25.0	43.58	-19.9			1.5			.039	.038	1.04	
A0911+67	9 11.70	67 58.0	145.88	39.1									
MK103	8.71	-25.1	38.38	-2.7									
A0911+39	9 11.77	39 28.0	183.35	56.1	.SBS9..	9	P048N			1.26	.39	1.17	
D 59	6.35	-25.0	43.82	-26.1	SX	9	1.7			.039	.038	1.18	
A0912+59	9 12.90	59 58.9	155.59	43.7						.93	.45	.83	
MK 19	7.64	-25.2	41.25	-9.3						.075	.100		
N2836	9 13.1	-69 8	285.73	192.7	.S....*		S030V						
	1.25	-24.9	-14.12	-32.2									
A0913+74	9 13.1	74 33	138.38	35.6	.S.....		P048N			1.17	.26	1.11	
	10.28	-25.3	35.64	2.9			1.7			.039	.038	1.14	
A0913+53	9 13.21	53 39.1	163.84	47.3	.P.....		P048N			.66	.18	.72	0.30s
MK104	7.11	-25.2	42.87	-14.5			7			.050	.050	.65	.05
N2822	9 13.4	-69 26	285.97	192.9	.E...S.	-58	S030V			1.32	.27	1.26	
	1.19	-24.9	-14.31	-31.9			2.1			.450	.224	1.43	
I0529	9 13.45	73 58.2	139.00	35.9	.SASS*	5	P048C			1.57	.31	1.50	
	10.08	-25.3	35.93	2.4			2.4			.039	.032	1.53	
N2793	9 13.71	34 38.4	190.06	59.8	.SBS9P.	9	W100V	I AF		1.12	.08	1.10	
	6.15	-25.2	43.85	-29.6	S 5P		3.0	I P A *		.036	.033	1.11	
N2811	9 13.83	-16 6.2	246.22	122.5	.SBT1..	1	P200V		3	1.43	.41	1.34	0.80
	4.73	-25.1	22.92	-56.1	S 4		3.9	SD GK	4	.032	.026	1.38	.04
N2815	9 14.08	-23 25.4	252.18	135.6	.SBR3*	3*	W100V			1.55	.43	1.45	
	4.52	-25.1	17.40	-55.9	S 3P	5*	3.5	S G		.032	.026	1.50	
A0914+53	9 14.1	53 12	164.41	47.7	.S...1..	1	P048N			1.36	.52	1.23	
	7.07	-25.3	43.09	-14.8			1.8			.039	.038	1.26	
N2798	9 14.16	42 12.7	179.53	54.6	.SBS1P.	1	W060V		4	1.44	.38	1.35	
	6.45	-25.2	44.30	-23.6	S NT**		2.9		5 S	.035	.030	1.38	
N2799	9 14.30	42 12.3	179.54	54.6	.SBS9S.	9S	W060V	S *FG*		1.27	.51	1.15	
	6.45	-25.2	44.32	-23.6			2.4			.036	.032	1.16	
N2787	9 14.83	69 24.9	144.05	38.5	.LBR...*	-1	W060V	B K	5	1.53	.17	1.49	0.90
	8.92	-25.4	38.05	-1.3	S 0P		3.3	B K	4 S	.048	.042	1.52	.07
A0915+45	9 15.0	45 52	174.42	52.4	.SXT3..	3	P048N			1.20	.11	1.18	
	6.62	-25.3	44.27	-20.6			1.9			.039	.038	1.20	
N2835	9 15.61	-22 8.8	251.42	133.2	.SBT5..	5	P200V			1.80	.16	1.76	
	4.56	-25.3	18.51	-55.7	S P		4.9	S A	2VS	.024	.018	1.80	
A0915-11	9 15.68	-11 53.2	242.93	115.2	PLA...*	-1	P048C			.88	.00	.88	
	4.84	-25.3	25.09	-55.1			1.3			.075	.100	.92	
A0915+71	9 15.72	71 37.0	141.51	37.3	.S...S.		P048C						
MK105	9.38	-25.5	37.15	.5									
N2824	9 16.11	26 28.8	201.25	66.7	.L.....	-2	P048N			1.10	.21	1.05	
MK394	5.95	-25.4	42.92	-35.3			1.6			.071	.071	1.08	
N2823	9 16.24	34 13.1	190.73	60.6	.SB.1..	1	P048N			1.01	.22	.96	
	6.12	-25.4	44.32	-29.6			1.4			.039	.038	.99	
N2805	9 16.29	64 19.1	150.02	41.5	.SXT7..	7	P200V		3VS	1.80	.10	1.77	
	8.08	-25.5	40.19	-5.5			4.9			.032	.024	1.79	
N2825	9 16.34	33 57.1	191.10	60.8	.S...1*	1*	P048C			1.04	.34	.96	
	6.11	-25.4	44.31	-29.8			1.3			.037	.034	.99	
N2826	9 16.37	33 50.0	191.27	60.9	.L...*/	-2*	P048C			1.26	.71	1.10	
	6.10	-25.4	44.30	-29.9			1.4			.040	.039	1.13	
N2830	9 16.65	33 56.9	191.12	60.9	.SB.0/*	0	P200C			1.12	.58	.98	
	6.11	-25.5	44.37	-29.7			2.8			.045	.040	1.01	
N2831	9 16.72	33 57.3	191.11	60.9	.E.0...*	-5	P200C			.90	.00	.90	0.43
	6.11	-25.5	44.39	-29.7			2.9			.071	.071	.94	.05
N2832	9 16.75	33 57.6	191.10	60.9	.E*2..*	-4	P200C			1.52	.17	1.48	1.10
	6.11	-25.5	44.39	-29.7	E T		4.0	ED *K		.071	.071	1.51	.04
A0917+71	9 17.00	71 45.4	141.30	37.4						1.10	.11	1.08	
MK 20	9.39	-25.6	37.18	.7						.050	.050		
N2814	9 17.14	64 27.9	149.79	41.5	.I.0.S.	0S	P200V			1.15	.53	1.03	
	8.09	-25.6	40.22	-5.3			3.2			.035	.031	1.06	
N2810	9 17.13	72 3	140.96	37.2	.E.0...*	-5	P048N			1.30	.00	1.30	
	9.45	-25.7	37.07	1.0			2.2			.071	.071	1.35	
A0917-12	9 17.40	-12 2.2	243.35	115.5	.I..9..*	10	P048F			1.15	.06	1.13	
D 60	4.84	-25.5	25.33	-54.7	I	9	1.8			.061	.058	1.15	
I2458	9 17.45	64 27.1	149.79	41.5	.I.0.P*	0	P048C			.74	.33	.66	
MK108	8.08	-25.6	40.26	-5.3			.7			.039	.038	.69	
N2820	9 17.71	64 28.3	149.76	41.6	.SBS5P/	5*	P200V			1.63	.78	1.45	
MK108	8.08	-25.6	40.28	-5.2			3.9			.032	.025	1.47	
N2848	9 17.81	-16 18.8	247.05	123.0	.SXS5*	5*	W100V			1.43	.18	1.39	1.05
	4.73	-25.5	22.70	-55.2	S 6	7*	3.5	S AF		.034	.029	1.42	.03
A0918-12	9 18.25	-12 22.0	243.78	116.2	.I..9..*	10	P048F			1.09	.08	1.07	
D 61	4.84	-25.5	25.28	-54.6	I	9	1.7			.061	.058	1.09	
N2841	9 18.58	51 11.3	166.95	49.5	.SAR3*	3	P200V	S K	4	1.91	.33	1.83	1.30
	6.89	-25.7	44.15	16.0	S 2	1	4.9		3 L	.025	.017	1.85	.03
N2844	9 18.63	40 21.8	182.13	56.6	.SAR1*	1*	W100V	SDP*G		1.28	.29	1.22	
	6.34	-25.6	45.15	-24.5	S 0		3.1		3VS	.035	.031	1.25	
N2855	9 19.04	-11 41.8	243.33	115.1	RSAT0..	0	P200V		D .K	1.43	.05	1.42	
	4.85	-25.6	25.85	-54.3	E 1		4.2		D4	.048	.035	1.46	
A0919+47	9 19.08	47 27.5	172.10	51.9						.70	.00	.70	
MK109	6.68	-25.7	44.80	-19.9						.075	.100		
A0919-22	9 19.18	-22 17.5	252.11	133.4	.I..9..*	10	P048F			1.30	.53	1.17	
D 62	4.57	-25.6	19.03	-54.8		9S	1.6			.046	.045	1.19	
N2852	9 20.08	40 22.7	182.10	56.8	.SXR1S.	1	W100V			1.09	.01	1.08	
	6.34	-25.8	45.43	-24.4			3.0			.046	.043	1.11	
N2853	9 20.12	40 24.9	182.05	56.8	.L8...*	-2	W100V			1.30	.28	1.24	
	6.34	-25.8	45.44	-24.3			3.1			.041	.043	1.27	
I2469	9 20.8	-32 13	259.90	149.8	.S...1..	1	P048N			1.56	.52	1.44	
	4.26	-25.8	12.51	-52.6			2.2			.039	.038	1.52	
N2857	9 21.1	49 34	169.09	50.9	.SAS5..	5	P200C			1.38	.04	1.37	
	6.77	-25.9	44.83	-17.0			3.8			.039	.038	1.39	
N2865	9 21.24	-22 56.8	252.96	134.4	.E.3...*	-5	W100V			1.31	.12	1.28	0.75
	4.55	-25.8	18.94	-54.3	E 4		3.3	ED K	D3 S	.100	.050	1.35	.06
N2859	9 21.26	34 43.7	190.16	51.1	RLBR...*	-1	P200V	B K	3	1.68	.06	1.67	1.10
	6.11	-25.9	45.5	-28.5	SBO		4.7		4	.040	.029	1.70	.04
A0921+17	9 21.87	17 52.6	212.89	75.8						.70	.25	.64	
MK398	5.60	-25.9	41.61	-40.3						.075	.100		
A0922-24	9 22.4	-24 54	254.66	137.7	.SXT4P.	4	P048C			1.12	.04	1.11	
	4.50	-25.9	17.81	-53.8			1.8			.061	.058	1.16	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _c (15)	B _T m.e. (16)	m' _E m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _E ² (U-B) _E ² (23)	Log S _R N _H N ₊ (24)	α ₋ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
A0911+16				.24											8362*	8236	S
A0911+47				.24											1 1 15	-126	
A0911+67				.31											4235	4262	
A0911+39				.24											0 1 105	27	
A0912+59				.27											9424	9555	
N2836				1.13											0 2 39	131	
A0913+74				.35												-12	
A0913+53	14.8	11.8	.26	0.43	-.30	0.45	-.35	.32							4215	4308	
N2822	.1	12.5	14.38	.04	.05	.03	.04	-.35							0 1 95	93	
I0529	12.66	.11	14.6	.35												-280	
N2793	12.9			.23												161	T
N2811	12.95		13.2	.38	0.98	0.51	1.02	.80							2225	2286	
N2815	12.5	12.25	11.7	.38	0.98	0.51	1.02	.80							0 2 43	61	
N2815	12.63	.08	13.2	11.51	.02	.03	.03	.35								-279	
A0914+53	12.66		14.2	.25												159	
N2798	12.9	13.0	.24	0.74	*	*		.60								58	P
V 50	12.86	.1	14.1	12.43	.04							.71*		1708	1709		
N2799		*	.24	*	*							1.03	2.315	0 1 75	1		
N2787	12.1	11.80	11.8	.32	1.00		1.02	.90				*					
A0915+45	11.84	.08	13.9	11.37	.04		.03							1737	1738		
N2835	12.0*	*	14.4	.46	*	*	*	*						10 40	1	PT	
A0915-11	10.95													620	758		
A0915+71	14.7	.15	14.0	.34	1.07	.45		.84	3.60	1.01				0 2 35	138		
N2824				.23	.06	.07		.45	16 511	.86				8096	8116		
N2823				.23	0.67	-.11	*	*				1.70		0 1 25	20		
N2805	11.78	.11	15.4	.29	.51	.07		.41				1.01	-6.52	886	617	P	
N2825				.23								1.01		1 1 15	-269		
N2826				.23										16160	15919		
N2830		*	.23	*	*	*	*	*						0 1 60	-241		
N2831	14.55		12.2	.23	1.00	0.53	1.01	.90							3562*		3710
N2832	12.9	.08	14.0	.24	.03	.04	.03	.50						0 3 38	148	T	
A0917+71	12.23	.06	14.6	12.12	.03	*	.02	.03						9235	9156		
N2814				.29	0.55	-.20	*	*						0 1 220	-79		
N2810	14.30	.08	13.6	13.61	.04	.03		-.30						6960	6921		
A0917-12				.34										0 1 120	-39		
I2458				.29										1726	1840		
72276				.29										1 2 11	114		
N2820	13.29	.11	14.3	.29	.50			.27	1.32*	.90*							-41
72276				.29	.07				2 1 1	.705							
N2848	12.8	12.65	13.4	.38	0.57	-.13	0.64	-.01									
A0918-12	12.64	.08	14.2	.34	.05	.05	.03	.03						0 1 95	115	P	
N2841	10.5	10.10	12.1	.25	0.85	0.41	0.94	.73									
N2844	10.17	.08	13.7	9.58	.03	.05	.02	.30									
N2855	13.0	13.65	14.2	.23	0.80	.02	*	*						5155	5114		
A0919+47	12.4	12.45	14.3	.33	0.90	*	*	.80						0 1 65	-41		
A0919-22	12.23	.13		.49	.04									6946	6905	P	
N2852				.23										0 1 50	-41		
N2853				.23										3526	3675		
I2469				.69										0 3 38	149		
N2857				.24													
N2865	12.6	12.35	11.6	.46	0.92	0.35	0.93	.79						1663	1778	T	
N2859	12.50	.09	13.6	11.85	.05	.06	.04	.27						0 1 95	115		
A0921+17	12.2	11.65	12.6	.23	0.93	.04	.04	.85									
A0922-24	11.44	.07	14.8	11.36	.04		.04										
				.49													
																	PST
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NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL (5)	Rev. type DDO type (6)	T L (7)	ST(1) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(DO) Log Do (12)	Log A _e m.e. (13)
N2883	9 23.1	-33 52	261.45	152.1									
	4.22	-26.0	11.70	-51.6									
N2872	9 23.00	11 39.0	220.54	82.7	.E.2...	-5	P200C			1.32	.04	1.31	
	5.43	-26.0	39.36	-43.9			3.7			.066	.056	1.35	
N2874	9 23.09	11 38.5	220.56	82.7	.SBR4..	4	P200C			1.39	.45	1.29	
	5.43	-26.0	39.38	-43.9			3.4			.036	.033	1.31	
A0923+19	9 23.20	19 36.1	210.86	74.4						.94	.05	.93	
MK400	5.64	-26.0	42.50	-38.9						.042	.045		
A0923+68	9 23.50	68 37.7	144.53	39.6	.SBS8P.	8	P200C			.83	.21	.78	*
MK111	8.61	-26.2	39.09	-1.5			2.6			.050	.050	.80	
A0923+35	9 23.82	35 6.8	189.68	61.3									
MK399	6.11	-26.1	45.96	-27.9									
N2884	9 23.98	-11 20.2	243.87	114.9	.S..05.	05	W060V			1.41	.28	1.34	
	4.87	-26.1	27.02	-53.0			2.9		3 S	.053	.045	1.38	
N2888	9 24.13	-27 49.1	257.16	142.4	.E.1...	-5	W100V			.88	.04	.87	
	4.42	-26.1	16.09	-53.0	E 2		2.5		3 S	.183	.095	.95	
N2870	9 24.2	57 36	158.07	46.3	.S..4..	4	P048N			1.41	.53	1.29	
	7.29	-26.2	43.37	-10.4			1.9			.039	.038	1.31	
N2889	9 24.78	-11 25.4	244.08	115.1	.SXT5..	5	W060V			1.31	.05	1.30	0.93
	4.87	-26.1	27.12	-52.9	S 4 T -*	2*	2.9	S F	3VS	.049	.040	1.33	.04
I2476	9 24.92	30 12.3	196.71	65.3	.L..-*	-3*	P048N			1.24	.05	1.23	
	5.94	-26.2	45.58	-31.3			2.0			.051	.058	1.26	
N2880	9 25.70	62 42.7	151.47	43.3	.LB.-..	-3	W060V	E2 K	3	1.41	.21	1.36	*
	7.75	-26.4	41.77	-6.2	E 3		3.0		4 S	.060	.043	1.40	
N2915	9 26.5	-76 25	291.98	197.4	.1B.95.	10*	S030V			1.19	.20	1.14	0.72
	4.65	-26.0	-18.36	-26.1			1.9		3	.158	.082	1.18	.04
A0926+56	9 26.61	56 4.3	159.95	47.5	PSB53..	3	P048N			1.23	.07	1.22	
MK114	7.14	-26.4	44.14	-11.4			2.0			.039	.038	1.24	
N2893	9 27.32	29 45.5	197.46	66.1	RSB0..	0	P048N			1.14	.03	1.13	
MK401	5.92	-26.4	46.01	-31.3			1.8			.039	.038	1.16	
I2487	9 27.34	20 18.7	210.38	74.5	.S..4*/	4*	P048C			1.30	.54	1.17	
	5.65	-26.4	43.65	-37.7			1.6			.038	.038	1.19	
A0927+49	9 27.43	49 28.7	168.96	51.8	.P.....		P048N			1.13	.19	1.09	
MK115	6.71	-26.5	45.85	-16.5			1.6			.050	.050	1.12	
N2902	9 28.50	-14 30.9	247.38	120.3	.LA50*.	-2	W100V			1.11	.04	1.10	
	4.80	-26.5	25.83	-52.4	E 0		3.0		04	.158	.085	1.15	
N2892	9 28.68	67 50.4	145.15	40.5	.LA..P*	-2	P048C			1.23	.00	1.23	
	8.38	-26.6	39.87	-1.9			2.0			.071	.071	1.27	
N2907	9 29.25	-16 31.0	249.17	123.6	.SAS15/	1	W100V			1.29	.17	1.25	
	4.75	-26.5	24.65	-52.5	S 2		3.2	EDP*K	3VS	.051	.040	1.29	
N2903	9 29.34	21 43.2	208.72	73.5	.SXT4..	4	P200V	S F	25	2.10	.28	2.03	1.49
	5.68	-26.6	44.54	-36.4	S 4	2	5.0		4	.024	.017	2.05	.02
N2906	9 29.5	8 40	224.92	87.4	.S..6*.	6*	P048N			1.21	.20	1.17	
	5.35	-26.6	39.42	-44.2			1.8			.039	.038	1.19	
A0930+55B	9 30.5	55 28	160.58	48.3									
MK116	7.05	-26.7	44.84	-11.5									
A0930+55A	9 30.51	55 27.8	160.53	48.3									
MK116	7.05	-26.7	44.84	-11.5									
N2911	9 31.09	10 22.6	223.18	85.7	.LAS..P*	-2	W100V	E P*	3	1.63	.12	1.60	1.17
	5.39	-26.7	40.57	-43.0	E 2P		3.9		4 S	.071	.071	1.63	.04
N2914	9 31.36	10 19.9	223.28	85.8	.SBS2..	2	W100V		3*	1.09	.18	1.04	
	5.39	-26.7	40.60	-42.9			2.8		4 S	.038	.036	1.06	
A0931+11	9 31.4	11 14	222.22	84.7									
	5.41	-26.7	41.02	-42.4									
N2919	9 32.11	10 30.5	223.18	85.7	.SXR3*.	3*	W100V			1.28	.40	1.18	
	5.39	-26.8	40.85	-42.7			3.0		3 S	.037	.033	1.20	
N2916	9 32.13	21 55.8	208.71	73.9	.SAT35.	38	P048C			1.42	.15	1.39	0.98
	5.68	-26.8	45.22	-35.8			2.3			.037	.033	1.41	.04
A0932+30	9 32.36	30 37.8	196.46	66.3									
MK402	5.92	-26.9	47.23	-29.9									
N2924	9 32.81	-16 10.5	249.52	123.2	.E.0...	-5	P048C			1.21	.03	1.20	
	4.77	-26.8	25.51	-51.6	E 0		2.0			.073	.088	1.25	
A0934+48	9 34.3	48 51	169.53	53.1									
	6.62	-27.0	47.08	-16.2									
N2935	9 34.44	-20 54.2	253.60	130.8	PSX53..	3	W100V			1.55	.08	1.53	
	4.65	-27.0	22.57	-51.4	SX2	1	3.8	RS *G	5	.034	.029	1.57	
N2936	9 35.1	2 58	232.10	95.4	.RING.B	10P	P200V			1.22	.27	1.15	0.80
	5.21	-27.1	37.71	-45.8			3.6			.050	.050	1.16	.04
N2937	9 35.1	2 58	232.10	95.4	.RING.A	-5P	P200V			.99	.17	.95	.045
	5.21	-27.1	37.71	-45.8			3.2			.042	.045	.99	.06
N2939	9 35.4	9 45	224.57	87.1	.S..4..	4	P048N			1.43	.40	1.33	
	5.37	-27.1	41.21	-42.4			2.0			.039	.038	1.35	
A0936+71	9 36.02	71 24.9	140.73	38.8	.IX59..	10	P048C			1.55	.07	1.53	
D 63	8.88	-27.3	38.66	1.3			2.6			.046	.037	1.55	
N2942	9 36.13	34 14.0	191.26	64.0	.SAS5*.	5	W060V	S AF		1.35	.09	1.33	*
	6.02	-27.2	48.41	-26.8	S 3	3*	3.0		3 S	.036	.032	1.35	
N2944.	9 36.33	32 32.3	193.81	65.4	.SBS5P*	5	P200C			1.10	.37	1.02	
	5.96	-27.2	48.31	-27.9			2.9			.038	.036	1.04	
A0936+04C	9 36.38	-4 38.0	239.97	105.9	.SBT3*P	3	P200C			.90	.45	.79	
	5.04	-27.2	33.58	-48.3			2.5			.061	.058	.82	
A0936+04A	9 36.38	-4 37.3	239.96	105.9	.E.4...	-5	P200C						
	5.04	-27.2	33.59	-48.3						.90	.14	.87	
A0936+04B	9 36.41	-4 38.4	239.98	105.9	.LAR-PP	-3	P200C			.075	.100	.91	
	5.04	-27.2	33.59	-48.3			2.8			.69	.35	.61	
A0936+04E	9 36.41	-4 37.8	239.97	105.9	.SAS15.	1	P200C			.061	.058	.64	
	5.04	-27.2	33.59	-44.3			2.1			.70	.17	.66	
A0936+04D	9 36.42	-4 36.6	239.96	105.8	.SBS0*.	0	P200C			.061	.058	.69	
	5.04	-27.2	33.61	-48.3			2.3			.95	.11	.92	
A0936+32A	9 36.4	32 36	193.72	65.4	.SBR5*P	5	P200C			.039	.038	.94	
	5.96	-27.2	48.33	-27.9			2.9						
A0936+32B	9 36.4	32 36	193.72	65.4	.LX.0*P	-2	P200C			.85	.06	.83	
	5.96	-27.2	48.33	-27.9			2.8			.042	.045	.86	
A0937+47	9 37.7	47 50	170.84	54.2	.S.....		P048N			1.28	.58	1.14	
	6.54	-27.3	47.84	-16.6			1.6			.039	.038	1.16	
A0937+21	9 37.93	21 27.4	209.94	75.4						.71	.05	.70	
MK403	5.64	-27.3	46.36	-35.1						.050	.050		
A0938+08	9 38.1	-8 43	244.07	112.0						1.42	.08	1.40	
	4.95	-27.3	31.37	-49.1						.075	.100		
N2955	9 38.24	36 6.8	188.45	62.9	PSAR3..	3	W100V	S FG	4 S	1.25	.26	1.19	*
	6.07	-27.4	48.94	-25.1	S 3	3	3.0			.035	.030	1.21	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _N N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _N N A ₂₁ (26)	RI HI (27)	V N ₀ m.e. (28)	V ₀ ΔV (29)	
N2883				.73											-290	P
N2872				.23										2976	2826	P
N2874				.23										0 1 95	-150	P
A0923+19				.23										3620	3470	P
A0923+68		14.3		.31	0.46	-.24	*	*	.32					0 1 95	-150	P
72280+V106		.1	12.8	13.81	.04	.04			-.34					2423	2310	P
A0923+35				.23										0 1 220	-113	P
N2884				.32										3661	3796	P
N2888	13.1	13.5		.54	.96	.32								0 2 43	135	
N2870	13.76	.15	12.8	.26	.06	.07								4773	4738	
N2889	12.4	12.50	12.6	.32	0.72	0.10	0.80	0.22	.62					0 1 220	-35	
12476	12.51	.09	13.8	12.12	.04	.04	.03	.04	.02						-239	
N2880				.22						1.63	1.145				81	
N2915	12.9	12.50		.28	0.88	*	*	*	.79					3377	3137	
A0926+56	12.58	.09	13.9	12.16	.05	0.05	0.51	-.04	.31					0 1 35	-240	
N2893		13.20	12.3	.86	0.56	.03	.04	.02	-.13					7980	7920	
12487		.09	13.5	.25	.03	.04	.02	.03						0 1 120	-60	
A0927+49				.22										1514	1620	
N2902	13.1			.34										0 1 50	413	
N2892	13.33		13.6	.30										0 2 20	-264	
N2907	12.9		13.9	.36										7504	7577	
N2903	10.3	9.50	12.4	.22	0.64	0.05	0.70	0.11	.53	1.78	1.09	2.05	3.10	0 2 39	73	
N2906	9.56	.08	14.1	9.05	.03	.05	.02	.02	-.03	5 5 4	1.07	2 .01	2.39	1712	1650	
A0930+558				.25										1 2 29	-62	
12 18				.25											-109	
A0930+55A				.25										7756	7796	
N2911	13.1	12.60	13.9	.23	1.00	0.48	1.05	0.53	.91	1.34			.98	0 2 43	40	
N2914	12.22	.13	15.3	12.27	.05	.06	.02	.03	.43	0 410	.09				-249	
A0931+11		14.0		.23	.91				.80						131	
N2919		.15	13.8	13.59	.06										-254	
N2916				.23												
A0932+30		12.65	13.0	.22	0.70	0.07	0.81	0.20								
N2924	13.2	.09	14.2	.22	.04	.04	.03	.03								
A0934+48	13.06		14.0	.23												
12 19				.39	*	*										
N2935	12.4		14.4	.24	0.87	0.08	0.82	0.06	.71							
N2936	12.00	13.95	13.4	13.44	.04	.04	.03	.04	-.06							
V316		.09	14.2	.24	1.03	0.44	1.04	0.48	.91							
N2937		14.65	14.31	.22	.04	.04	.04	.08	.42							
V316		.05		.22												
N2939				.32	.47				.38							
A0936+71		13.41	15.8	13.02	.07	*						1.33	.22			
N2942	12.9	.11		.22	*							2 .01				
N2944.	12.79	*	14.2	.22												
ZCG =V 82				.26												
A0936-04C				.26												
V116				.26												
A0936-04A				.26												
V116				.26												
A0936-04B				.26												
V116				.26												
A0936-04E				.26												
V116				.26												
A0936-04D				.26												
V116				.22	*	*										
A0936+32A				.22												
32 60=V 83				.22												
A0936+32B				.23												
32 60=V 83				.21												
A0937+47				.28												
A0937+21				.28												
A0938-08				.22												
N2955	13.1	13.45	13.9	.22	0.78	0.25	*	*								
	13.33	.05			.02	.03										

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL (5)	Rev. type DDO type (6)	T (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log A _e m.e. (14)
N2962	9 38.28	5 23.7	230.00	92.8	RLXT..	-1	W100V	D P*G		1.52	.14	1.48	1.05
	5.27	-27.3	39.67	-43.9	S 4	5	3.7		04 S	.038	.032	1.51	.04
N2977	9 38.85	75 5.4	136.72	36.6	.S..3*	3*	P048C			1.24	.33	1.16	
	9.74	-27.6	36.79	4.3			1.7			.039	.032	1.19	
N2950	9 38.97	59 4.8	155.20	46.9	RLBR0..	-2	P200V	R K	3	1.50	.17	1.46	0.65
	7.22	-27.5	44.66	-8.0	S 02		4.2		5	.043	.034	1.49	.07
A0939+76	9 39.10	76 34.8	135.20	35.6	.P.....		P048N			1.05	.34	.97	
MK118	10.25	-27.6	35.94	5.5			1.3			.039	.038	1.01	
N2967	9 39.49	0 33.9	235.38	99.1	.SASS..	5	L036V	S F	2	1.48	.02	1.47	*
	5.16	-27.4	37.28	-45.8	S 5 K	5*	2.9		3VS	.039	.032	1.49	
N2964	9 39.94	32 4.6	194.62	66.4	.SXR4*.	4	W060V		4	1.47	.24	1.42	*
MK404	5.93	-27.5	49.02	-27.7	S 5 N	3*	3.1	S F	3 S	.033	.024	1.44	
N2974	9 40.03	-3 28.1	239.52	104.7	.E..4...	-5	W060V			1.53	.21	1.48	1.03
	5.07	-27.5	35.01	-47.1	S 0		3.2	DS K	4	.058	.040	1.52	.06
A0940+66	9 40.17	66 12.5	146.34	42.4	.P.....		P048N			.71	.08	.69	
MK119	7.93	-27.6	41.64	-2.4			.9			.039	.038	.72	
N2968	9 40.23	32 9.6	194.51	66.4	.I..0...	0	W060V			1.34	.15	1.31	0.9
	5.93	-27.5	49.09	-27.6			2.9		3 S	.037	.027	1.36	.1
N2970	9 40.55	32 12.5	194.44	66.4	.E..1*.	-5	P048C	D P*GK*		1.02	.05	1.01	
MK405	5.93	-27.5	49.16	-27.5			1.6			.049	.048	1.04	
N2980	9 40.74	-9 23.0	245.16	113.2	.SB..4*.	4	P048C			1.26	.24	1.20	
	4.94	-27.5	31.44	-48.6			1.9			.056	.048	1.23	
N2978	9 40.82	-9 31.0	245.29	113.4	.SA..3*.	3	P048C			1.09	.04	1.08	
	4.94	-27.5	31.37	-48.6			1.7			.057	.051	1.11	
A0940-05	9 40.9	-5 4	241.21	107.0	.SB583/	8	P200C			1.13	.73	.96	
	5.04	-27.5	34.21	-47.4			2.6			.039	.038	.98	
N2959	9 40.98	68 49.5	143.30	40.7	PSXT2P*	2	P048C			1.17	.01	1.17	
	8.29	-27.7	40.38	-.4			1.9			.048	.042	1.20	
A0941-05	9 41.0	-5 3	241.22	107.0	.SB593/	9	P200C			1.08	.47	.97	
	5.04	-27.5	34.24	-47.4			2.8			.039	.038	.98	
A0941+29	9 41.14	29 50.1	198.06	68.4									
MK406	5.86	-27.6	48.98	-29.1						.97	.51	.85	
N2961	9 41.20	68 50.3	143.27	40.7	.S..3*.	3*	P048C			1.0	.038	.88	
	8.29	-27.7	40.39	-.4			1.0			.038	.036	.88	
N2983	9 41.36	-20 14.8	254.32	129.8	.LBT...*	-1	W100V		3	1.41	.16	1.37	*
	4.69	-27.6	24.19	-49.7	SB0		3.5	B K	4VS	.039	.036	1.42	
N2986	9 41.95	-21 2.9	255.05	131.0	.E..2...	-5	W100V			1.40	.04	1.45	0.90
	4.67	-27.6	23.77	-49.6	E 1		3.6	ED K		.062	.048	1.45	.05
A0942-31	9 42.6	-31 36.6	262.89	147.0	.SK58P.	8	P048N			1.34	.09	1.32	
D235	4.39	-27.6	16.17	-48.3	I	8	2.2			.046	.045	1.36	
A0942+09	9 42.6	9 20	226.20	88.9	.S..4*.	4	P048N			1.27	.25	1.21	
	5.35	-27.7	42.58	-41.1			1.9			.039	.038	1.23	
N2957A	9 42.72	73 13.2	138.46	38.0	.E..1*.	-5*	P048C			.80	.29	.73	
MK121	9 42.76	73 13.1	138.46	38.0	.LA..*.	-2	P048C			.042	.045	.78	
N2957B	9 42.76	73 13.1	138.46	38.0			.96			.42	.87		
	9.12	-27.8	38.09	3.0			1.1			.042	.045	.91	
N2989	9 43.07	-18 8.7	252.98	126.6	.SAS4*.	4	P048C			1.15	.12	1.12	
	4.75	-27.7	25.95	-49.3	S 4	3	1.8			.057	.051	1.15	
N2976	9 43.17	68 8.9	143.92	41.3	.SA..5P.	5	P200V	I A	2	1.69	.29	1.63	1.30
	8.15	-27.8	40.90	-.8	S		4.5		3VS	.031	.022	1.66	.05
N2963	9 43.24	73 11.8	138.45	38.0	.SB..2*.	2	P048N			1.16	.29	1.10	
MK122	9.10	-27.9	38.13	3.0			1.6			.039	.038	1.13	
N2992	9 43.29	-14 5.8	249.71	120.4	.S..1P.	1	P200C			1.61	.46	1.50	*
	4.84	-27.7	28.78	-48.8	P T .		3.9	S P G *	3 S	.051	.042	1.54	
A0943+46	9 43.3	46 0	173.28	56.3						1.01	.00	1.01	
	6.41	-27.8	49.13	-17.3						.042	.045		
A0943+54A	9 43.3	54 40	160.77	50.2						.87	.00	.87	
	6.86	-27.8	17.42	-10.9						.075	.100		
A0943+54B	9 43.4	54 41	160.74	50.2									
	6.86	-27.8	46.84	-10.9									
N2993	9 43.40	-14 8.2	249.77	120.5	.S..1P.	1	P200C			1.21	.10	1.19	
	4.84	-27.7	28.77	-48.8	P T .		3.4	S P G *	4	.053	.045	1.23	
N2997	9 43.46	-30 57.6	262.59	146.0	.SXT5*.	5	W100V	S F	4	1.91	.10	1.94	1.5
	4.41	-27.7	16.72	-48.2	S 5	1	4.5		4VS	.032	.024	1.94	.07
A0943+01	9 43.5	1 54	234.71	98.0	.SB....		P048N			1.44	.49	1.33	
	5.19	-27.7	38.86	-44.3			2.0			.039	.038	1.35	
I0562	9 43.54	-3 44.4	240.44	105.5	.S..53/	53	P048C			1.18	.50	1.06	
	5.07	-27.7	35.54	-46.4			1.4			.057	.050	1.08	
N2990	9 43.66	5 56.4	230.31	93.0	.S..5*.	5*	W060V	I *A	3VS	1.12	.24	1.06	
	5.28	-27.8	41.10	-42.5	S *		2.4			.036	.033	1.08	
A0943+56	9 43.70	56 20.2	15-.47	49.2									
MK123	6.96	-27.8	46.29	-9.7									
I0563	9 43.74	3 16.6	233.27	96.3	.SBR2*P	2	P200C			1.03	.29	.96	
	5.22	-27.8	39.68	-43.7			2.9			.039	.038	.98	
I0564	9 43.76	3 18.1	233.25	96.3	.SAS56P	6	P200C			1.28	.53	1.15	
	5.22	-27.8	39.70	-43.7			3.1			.039	.038	1.17	
N3001	9 44.11	-30 12.4	262.17	144.8	.SXT4*.	4	P048C			1.49	.15	1.45	
	4.44	-27.8	17.42	-48.2	S 4	2*	2.4			.039	.038	1.50	
A0944+39	9 44.72	39 19.0	183.49	61.4									
MK407	6.14	-27.9	50.19	-22.0									
A0944+64	9 44.9	64 25	148.13	43.9	.S..6*.	6*	P048N			1.26	.74	1.09	
	7.64	-28.0	42.94	-3.5			1.4			.039	.038	1.11	
A0944+58	9 44.96	58 12.2	155.90	48.0	.SB....		P048N			1.07	.04	1.06	
MK 21	7.08	-27.9	45.73	-8.1			1.7			.100	.100	1.08	
A0945+33	9 45.13	33 6.9	193.18	66.4									
MK408	5.93	-27.9	50.20	-26.2									
N2998	9 45.58	44 19.0	175.72	57.8	.SXT5*.	5	W100V	S F	3VS	1.48	.29	1.41	
	6.32	-28.0	49.81	-18.3	S 5	3	3.5			.032	.026	1.43	
N3003	9 45.62	33 39.2	192.35	66.0	.S..45.	45	W060V	SI *A *	2	1.77	.53	1.64	*
	5.95	-27.9	50.34	-25.8	SX5	6*	3.4		1	.031	.023	1.66	
N2985	9 45.89	72 30.7	139.02	38.6	PSAT2*.	2	W060V	S FG	4	1.63	.10	1.61	*
	8.87	-28.1	38.68	2.7	S 2	1	3.5	S GK	D4 S	.037	.027	1.64	
A0946+55	9 46.05	55 48.8	159.00	49.8						.55	.27	.49	
MK 22	6.90	-28.0	46.79	-9.8						.050	.050		
A0946-07	9 46.4	-7 50	244.83	111.5	.SAT5*.	5	P048C			1.22	.13	1.19	
	4.98	-28.0	33.51	-46.9			2.2			.061	.058	1.21	
N3011	9 46.74	32 26.9	194.26	67.2	.L.....	-2	P048N			1.08	.05	1.07	
MK409	5.91	-28.0	50.48	-26.4			1.7			.042	.045	1.10	
A0947+46	9 47.05	46 11.6	172.79	56.6									
MK125	6.38	-28.1	49.73	-16.8									

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _C (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₀ N ₀ m.e. (28)	V ₀ ΔV (29)		
N2962	12.9	12.75	13.5	.23	1.09		1.03		1.00						1970	1794	T
N2977	12.38	.1	14.9	.34	.02		.02								0 1 150	-176	
N2950	12.1	11.85	10.6	.26	0.90		0.94		.81						1362	1451	
A0939+76	11.91	.08	13.8	.35	.04		.04								0 2 38	89	PT
N2967	12.4	12.30	.24	.24	0.66	0.08	*	*	.59	.905	.905		2.315	2355	2526		
N2964	12.10	.08	14.5	12.03	.03	.03			.03	1 0 1	.905			0 3 38	171		
N2974	11.9	12.05	.22	.22	0.71		*		.61	.90*	.75*		2.715	2159	1963	T	
N2974	12.00	.05	13.6	11.63	.02				.89	2 1 0				0 3 41	-49		
A0940+66	12.7*	11.75	13.9	.26	0.97	0.56	0.97	0.60	.51					1998	1787		
N2968	11.79	.07	13.9	11.46	.03	.06	.03	.06						0 2 26	-211	PST	
N2968	12.8	12.80	12.8	.22	1.00	0.65	1.15	0.75	.91					3007	3131		
N2970	12.80	.08	14.0	12.45	.02	.03	.03	.03	.58					0 1 220	124		
N2980				.28										1613	1564	P	
N2978				.29										0 1 73	-49		
A0940-05				.26											-48		
V 52				.30											-232	P	
N2959				.26										1951	1734		
A0941-05				.21										0 1 52	-217		
V 52				.30											136	P	
A0941+29				.21											-217		
N2961				.30										5093	5032		
N2983	12.8	12.60	.37	.37	0.92		*		.79					0 2 71	-61	S	
N2986	12.57	.09	14.1	12.10	.04										136		
A0942-31	12.2	11.95	11.9	.38	1.02	0.61	1.03	0.64	.91					2015	1752		
A0942+09	11.97	.09	13.8	11.53	.05	.06	.03	.03	.53					0 1 100	-263	PT	
N2957A				.33										2397	2132		
N2957B				.33										0 1 100	-265		
N2989	13.1		13.7	.35										1257	972	P	
N2976	13.42	10.85	12.8	.30	0.70	*	0.70	0.05	.58			1.36		1 0 15	-285		
N2963	11.2	.08	13.4	10.32	.03		.03	.04				1 .01			-159		
N2992	11.08			.33										6561	6717	P	
A0943+46				.31	0.91	0.45	*	*	.74					0 2 39	156		
12 21	13.0	12.8	.13	14.5	.04	.05			.31						4126		
A0943+54A		15.4	.24	.24	1.04	.67								0 1 35	-257	PT	
A0943+54B		.15	.24	.24	.06	.07				1 0 0				42	175		
N2993				.31	.46	-.40			.35					0 1 29	133		
N2997	13.18	.15	13.7	12.68	.06	.07			-.46					6712*	6868	P	
A0943+01	11.0	10.6	13.6	.54	*	*	0.83	0.29		1.85	.015	2.03	2.055	0 2 39	156		
I0562	10.26	.3	14.7	9.92			.04	.05		1 3 5	1.57	1 .01	1.575	2110	1864		
N2990				.25										0 1 90	-246	P	
A0943+56				.25										4965	4987		
I0563				.23										0 1 105	22		
I0564				.23											67	P	
N3001	13.2			.52											67		
A0944+39	12.75		14.6	.22										2060	1814		
A0944+64				.28										0 1 90	-246	P	
A0944+58		*		.25	*	*								0 1 90	805		
A0945+33				.21										1 1 19	-284		
N2998	12.8			.22											-190	PST	
N3003	12.65		14.2	.21	.47		*		.31						-212		
N2985	12.5	12.15	14.5	11.51	.04										-173		
A0946+55	12.00	.09		.25										7674	7750	T	
A0946-07				.27										0 3 38	76		
N3011			*	.21										6069	5884		
A0947+46				.22										0 1 95	-185	P	
														6136	5952		
														0 1 95	-184		
															-283	PST	
														1629	1618		
														0 2 71	-11		
															115	T	
														8504	8589		
														0 2 39	85		
														1487	1444	PST	
														0 2 71	-43		
															14		
														1476	1436	T	
														0 1 60	-40		
															1277		
														0 1 50	153	T	
														1485	1558		
														0 1 95	73		
														6572	6346	T	
														1 1 14	-226		
														1464	1417		
														0 2 71	-47	T	
														7413	7437		
														0 3 44	24		

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log Do (13)	Log A _e m.e. (14)
A0947+34	9 47.2	34 39	190.81	65.4									
N3023	5.97	-28.1	50.72	-24.9	.SX56P	6	P048C			1.49	.25	1.43	
A0947+28	9 47.31	0 51.2	236.51	99.9			2.3			.038	.035	1.45	
	5.17	-28.0	39.04	-43.9	.E.1.5.	-55	P048C			.91	.06	.90	
N3020	9 47.31	28 14.8	200.81	70.8			1.3			.075	.100	.93	
	5.79	-28.1	50.06	-29.1	.SBR6*	6	P048C			1.51	.26	1.45	
A0947+31	9 47.41	13 2.9	222.37	85.5			2.3			.035	.031	1.47	
D 64	5.42	-28.1	45.33	-38.2	.I..9..	10	P048N			1.34	.37	1.26	
	9 47.43	31 43.3	195.42	67.9	I	8*	1.9			.039	.038	1.27	
N3024	9 47.76	13 0.1	222.48	85.6	.S..5*/	5*	P048C			1.34	.59	1.20	
	5.42	-28.1	45.39	-38.1			1.7			.036	.033	1.22	
N3021	9 48.00	33 47.3	192.19	66.3	.SAT4*	4	W100V	S AF	4VS	1.23	.21	1.18	
	5.94	-28.1	50.84	-25.3	S 3		3.1			.034	.029	1.20	
N3038	9 49.08	-32 31.1	264.60	147.9	.SA51..	1	P048C			1.41	.18	1.37	
A0949+01	4.39	-28.2	16.39	-46.7	S 0 *		2.2			.061	.058	1.43	
D 65	9 49.17	1 41.0	235.98	99.1	.I..9..	10	P048F			1.06	.09	1.04	
N3032	5.18	-28.2	39.90	-43.1	I	9	1.6			.052	.050	1.05	
	9 49.24	29 28.3	199.02	70.1	.LXR0..	-2	P200V	SDP*G *		1.39	.06	1.37	
	5.81	-28.2	50.67	-28.0	S 0		4.1	SD *G *	4 S	.046	.040	1.40	
N3059	9 49.65	-73 41.2	291.16	194.0	.SBT4..	4	B060V			1.51	.04	1.50	
	1.02	-28.1	-15.36	-26.9			3.3			.065	.040	1.60	
A0949+43	9 49.7	43 5	177.45	59.3	.SX53..	3	P048N			1.38	.23	1.32	
	6.24	-28.3	50.74	-18.6			2.1			.039	.038	1.34	
N3039	9 49.91	2 23.4	235.36	98.3	.SX.4*	4*	P048C			1.12	.25	1.06	
	5.20	-28.2	40.46	-42.6			1.6			.038	.035	1.08	
A0950+37	9 50.14	37 59.6	185.50	63.2									
MK410	6.06	-28.3	51.30	-22.1						.87	.00	.87	
A0950+36	9 50.3	36 18	188.20	64.6						.075	.100		
	6.00	-28.3	51.38	-23.3									
N3041	9 50.38	16 54.9	217.67	82.0	.SXT5..	5	W060V	S AF	3 S	1.57	.18	1.53	
	5.50	-28.3	47.57	-35.4	S 5	4*	3.3			.035	.030	1.55	
N3044	9 51.10	1 49.7	236.20	99.1	.SB555/	5*	W100V	SI *A		1.68	.73	1.51	1.10
	5.19	-28.3	40.37	-42.6	S 5 *		3.4	S *F *	1	.030	.024	1.53	.05
N3027	9 51.29	72 26.4	138.79	39.0	.SBT7*	7*	W060V			1.67	.30	1.60	
	8.72	-28.5	39.05	2.9			5			.034	.026	1.62	
N3061	9 51.31	76 6.2	135.13	36.5	PSBT5..	5	P048C			1.31	.03	1.30	
	9.68	-28.5	36.80	5.6			2.2			.049	.039	1.33	
N3031	9 51.50	69 18.3	142.09	41.1	.SA52..	2	....V	S K	3	2.41	.26	2.35	1.85
	8.15	-28.5	40.90	.6	S 3	2	5.0	S GK		.026	.019	2.38	.04
N3034	9 51.68	69 54.9	141.42	40.7	.I..0..	0	....V	I A		2.05	.39	1.96	1.45
	8.24	-28.5	40.56	1.0	P		5.0	E7P*		.030	.022	2.00	.04
N3052	9 52.10	-18 24.2	254.88	127.1	.SXR5*	5	W060V			1.32	.13	1.29	
	4.76	-28.4	27.28	-47.1	S 5	3	2.9	S AF*	3 S	.050	.040	1.30	
N3054	9 52.20	-25 28.0	260.20	137.5	.SXR3..	3	W100V			1.59	.18	1.55	
	4.60	-28.4	22.13	-47.1	S 3 *	4*	3.8			.030	.024	1.59	
N3056	9 52.30	-28 3.7	262.07	141.3	RLAS+*	-1	W100V			1.31	.16	1.27	
	4.53	-28.4	20.21	-46.8	E 3		3.3			.067	.061	1.33	
N3055	9 52.68	4 30.4	233.55	96.1	.SX55..	5	W100V	SB *AF	4	1.34	.20	1.30	
	5.24	-28.5	42.22	-41.1	S 5	3*	3.3		4VS	.034	.029	1.32	
N3043	9 52.70	59 32.7	153.54	47.9	.S..3*/	3*	P048C			1.30	.44	1.19	
	7.07	-28.5	47.57	-6.5			1.7			.037	.034	1.21	
A0952+08	9 52.84	8 37.7	228.76	91.3	.S..28P	25	P048C			1.03	.28	.97	
	5.32	-28.5	44.43	-39.2			1.4			.039	.038	.99	
12522	9 52.97	-32 54.0	265.51	148.2	.SB55P*	5	P048C			1.44	.22	1.39	
	4.40	-28.4	16.63	-45.9	S 5 K	75	2.2			.042	.045	1.44	
12523	9 52.98	-32 58.4	265.56	148.3	.S..3P*	3	P048C			1.16	.24	1.11	
	4.40	-28.4	16.57	-45.8			1.7			.038	.035	1.16	
A0953+60A	9 53.27	60 19.6	152.50	47.4						.70	.33	.63	
MK128	7.13	-28.6	45.76	-5.9						.075	.100		
A0953+60B	9 53.45	60 12.3	152.64	47.5						.58	.00	.58	
MK 23	7.11	-28.6	45.83	-5.9						.075	.100		
A0953+69	9 53.47	69 16.9	141.99	41.3	.I..9..	10	P048N			1.39	.08	1.37	
D 66	8.10	-28.6	41.06	.7	I	9	2.3			.052	.050	1.38	
A0953+46	9 53.55	46 41.8	171.64	57.1						.87	.14	.84	
MK129	5.71	-28.6	50.71	-15.6						.075	.100		
A0953+29	9 53.87	29 3.8	199.90	71.2	.I..9P.	10	P048F			1.41	.37	1.33	
D 68	5.78	-28.6	51.61	-27.5	P		2.0			.039	.038	1.34	
12524	9 54.60	33 51.4	192.18	67.2						.87	.14	.84	
MK411	5.90	-28.6	52.21	-24.2						.075	.100		
A0955+32	9 55.08	32 38.7	194.16	68.3									
MK412	5.87	-28.7	52.25	-25.0									
N3067	9 55.43	32 36.5	194.23	68.4	.SX525.	25	W100V	I A *	2	1.39	.38	1.30	1.00
	5.86	-28.7	52.32	-24.9	S 4	5	3.2			.034	.029	1.32	.06
N3068B	9 55.76	29 6.6	199.92	71.4	.E..1.*P	-5*	P200C			.48	.12	.46	
	5.77	-28.7	52.03	-27.1			2.0			.050	.050	.49	
N3068A	9 55.79	29 7.0	199.91	71.4	.L..-P*	-3*	P200C			1.14	.08	1.12	
	5.77	-28.7	52.03	-27.1			3.3			.071	.071	1.15	
N3078	9 56.14	-26 41.2	261.79	139.2	.E.2..	-5	W100V			1.29	.11	1.26	0.90
	4.58	-28.7	21.80	-46.1	E 3		3.3		4	.129	.066	1.33	.06
A0956+30	9 56.53	30 59.2	196.91	69.9	.I8.9..	10	P048C			1.69	.19	1.64	
D 69	5.82	-28.8	52.42	-25.8	I	9	2.8			.046	.037	1.65	
N3074	9 56.7	35 38	189.28	66.1	.SXT5..	5	P048N			1.40	.04	1.39	
	5.94	-28.8	52.67	-22.8			2.3			.039	.038	1.41	
A0956+54	9 56.9	54 47	159.53	51.6	.S.....		P048N			1.25	.69	1.09	
	6.71	-28.8	48.61	-9.5			1.4			.039	.038	1.11	
N3087	9 57.0	-33 59	266.90	149.4	.E..0..	-5	P048C			1.27	.17	1.23	
	4.39	-28.7	16.33	-44.8			1.6			.224	.129	1.32	
N3081	9 57.17	-22 35.2	259.03	133.2	RLXR+*	-1	W100V			1.34	.09	1.32	
	4.68	-28.8	25.03	-46.1	S 4	5*	3.4	D GK*	4	.061	.047	1.37	
N3089	9 57.35	-28 5.4	262.99	141.1	.SXT3..	3	W100V			1.27	.14	1.24	
	4.55	-28.8	20.91	-95.7	S 3 N5		3.2		4 S	.057	.049	1.28	
A0957+05	9 57.39	5 34.3	233.21	95.5	.I8S9..	10	P048C			1.66	.14	1.63	1.50
D 70	5.26	-28.8	43.78	-39.6	I	8	2.8			.039	.032	1.64	.05
N3073	9 57.49	55 51.6	158.00	50.9	.LX.-..	-3	P048C			1.18	.02	1.17	
MK131	6.76	-28.9	48.25	-8.7			1.9			.048	.042	1.20	
N3065	9 57.59	72 24.6	138.44	39.4	.LAR0..	-2	P200V	SDP*F *		1.30	.03	1.30	0.70
	8.55	-28.9	39.45	3.2	S 0		4.0	D K	4 S	.057	.040	1.34	.05
N3066	9 57.86	72 21.9	138.47	39.4	PSXS4P.	4	P200V			1.09	.03	1.08	0.60
MK133	8.54	-29.0	39.49	3.2			3.8		3	.043	.037	1.11	.03

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _R N _H N _H N _H (24)	α ₊ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
A0947+34				.21											6595	6560	S
N3023				.23											0 1 105	-35	
A0947+28		12.3		.21	.33	-.31										-194	
N3020		.15	11.7	.21	.06	.07										-68	
A0947+31				.21												-142	
N3024				.21								.91			513	463	
N3021	12.7			.21								1.02			1 1 14	-50	
N3038	13.07		13.5	.21												-142	
	12.9	*		.55	*	*	*	*							1534	1495	
A0949+01	12.7		14.2	.23											0 1 32	-39	
N3032	12.8	12.6		.21	.73				.66			.48			1854	-286	
	12.52	.15	14.3	12.34	.06							1.01			1 0 10	1664	
N3059	12.2			1.06											1568	-190	PT
	11.9		14.2												0 1 150	-61	
A0949+43				.22											1223	954	
N3039				.23											0 2 32	-269	
A0950+37				.21											4786	4794	
A0950+36				.21											0 1 50	8	
															6944	-187	
															0 2 71	-17	S
N3041	12.7	12.25		.21	0.89	*			.71							-26	
N3044	12.25	.09	14.5	11.89	.04							1.02			1417	1294	
	12.6	12.55	13.5	.23	0.53	-.21	0.66	-.14	.33			1.01	2.13	1 0 13	-123		
N3027	12.4	.09	14.9	11.73	.04	.04	.04	.04	-.35						1335	1146	
		.11	14.9	11.89	.35										0 2 24	-189	
N3061		13.56		.35								1.69			1072	1225	T
		.11	14.9									1.01	.45		1 1 17	153	
N3031	8.9	7.75	12.5	.30	0.93	*	0.96	0.66	.81	1.89	.495	2.78	4.63		169	169	PT
	7.89	.07	14.9	7.24	.04		.03	.05		2 3 2	1.335	3.02	2.35	2 6 5	-44	95	
N3034	9.4	9.3	12.0	.30	0.87	*	0.89	0.38	.74	2.94	.27	2.51	.54		246	388	PT
N3052	9.1	.1	13.5	8.72	.02		.03	.04		18 8 5	.38	1.03	1.52		2 8 6	142	
N3054	12.8		14.9	.34											3586	3329	
N3056	12.6		14.5	.42											0 1 40	-257	
	12.13		14.5	.46											2199	1926	
N3055	12.5		13.5												0 1 42	-273	
	12.5	12.7		.22	.6				.51							-278	
	12.6	.15	13.7	12.31	.06										1794	1616	
N3043	13.2			.25											0 1 68	-178	
A0952+08	13.4		13.7	.21												92	
I2522	12.9			.21											1283	1122	
I2523	12.72		14.2	.55											0 1 100	-161	
A0953+60A				.26												-286	
A0953+60B				.26											9235	9331	
72301				.30	*	*									0 1 220	96	
A0953+69		*		.30	*	*									9490	9586	
A0953+46				.22											0 2 50	96	
A0953+29				.21											4653	4680	
I2524				.21								1.17			0 3 38	27	
												1.01			505	442	
A0955+32				.21											1 0 10	-53	
															1509	1471	
															0 2 71	-38	
N3067	12.8	12.70	13.2	.21	0.98	0.55	1.04	0.63	.85						4538	4494	
N3068B	12.92	.09	13.5	12.17	.04	.04	.04	.04	.43						0 2 71	-44	P
N3068A				.21											1459	1414	
N3078	12.4	12.10	12.1	.43	1.03	0.66	1.04	0.66	.91	1.48	1.235		1.28		0 2 36	-45	
	12.42	.09	13.3	11.63	.04	.04	.04	.04	.51	1 3 4	.46				6236	6174	P
A0956+30		13.09	15.9	12.69	.44				.36						0 1 23	-62	
N3074		.11		.21	.07							1.56			6409	6347	P
A0956+54				.24								1.01	-.03		0 1 19	-62	
N3087	13.0			.56											2506	2231	
N3081	12.87		13.3	.37											0 3 22	-275	
N3089	12.65		14.9												27	-26	T
A0957+05	13.0		13.9	.45											1 0 10	-53	
N3073	13.09		14.7	.24	.04		.04		.43						5144	5115	S
		11.9	14.9	.22	0.52		0.52								1 2 12	-29	
		.1	14.7	11.54	.04		.04								69		
N3065	12.9	12.95	11.9	.32	0.94	*	0.96	0.59	.85							-287	PT
72308	12.73	.13	14.2	12.59	.05		.04	.06							296	-278	T
N3066		13.55	12.9	.32	0.64	-.09	0.69	0.09	.55						1 0 10	-173	
Z66		.07	13.0	13.19	.03	.03	.03	.03	-.16						1057	1131	
															0 1 105	74	
															1963	2114	PT
															0 2 26	153	
															2050	2203	
															0 3 31	153	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log D ₀ (12)	Log A _e m.e. (13)
N3095	9 57.88	-31 18.8	265.28	145.7	.SXT5..	5	R060V			1.50	.16	1.46	
	4.47	-28.8	18.51	-45.1	SX SNTS		3.2			.039	.032	1.50	
N3091	9 57.88	-19 23.7	256.76	128.7	.E.3.*.	-5*	W060V	OE *K	3	1.34	.10	1.32	
	4.76	-28.8	27.50	-45.8	E 2		2.9			.183	.095	1.37	
A0958-14	9 58.2	-14 44	253.14	122.0	.SXR5..	5	P048C			1.27	.18	1.23	
	4.86	-28.9	30.93	-45.3			1.9			.061	.058	1.26	
N3100	9 58.46	-31 25.4	265.45	145.8	.LXS0P.	-2	R060V		4	1.44	.20	1.39	
	4.47	-28.9	18.51	-45.0			3.0			.063	.049	1.46	
N3079	9 58.58	55 55.4	157.82	51.0	.SBS5./	5	W060V	SI *FG	1	1.88	.65	1.72	
	6.75	-28.9	48.36	-8.5	S 3 NT-	3*	3.5			.028	.020	1.74	
N3077	9 59.36	68 58.5	141.91	41.9	.I.0.P.	0	P200V	E P		1.66	.10	1.64	1.25
	7.93	-29.0	41.66	.8	E 2P		4.6	EDP		.032	.022	1.68	.03
N3098	9 59.47	24 57.2	206.81	75.7	.L...../	-2	W100V	n K		1.41	.53	1.29	0.70
	5.65	-29.0	52.07	-29.0	E 7		3.1		3 S	.039	.034	1.32	.05
A0959+43	9 59.73	43 25.7	176.40	60.3									
MK134	6.17	-29.0	52.48	-17.1									
N3057	9 59.85	80 31.7	130.70	33.7	.SBS8..	8	P048N			1.39	.18	1.34	
	11.36	-29.2	34.19	9.1	S	7	2.2			.046	.045	1.36	
A1000+59	10 0.37	59 40.7	152.70	48.5						.79	.08	.77	
MK 25	6.98	-29.1	46.85	-5.7						.050	.050		
N3109	10 0.78	-25 54.8	262.10	138.0	.SBS9./	9	W060C			2.16	.61	2.01	
	4.62	-29.0	23.07	-45.1	I	8	4.1			.033	.025	2.03	
O236	10 0.9	41 0	180.30	62.4	.IXS9..	10	P200C			1.51	.15	1.48	
N3104		6.08	-29.1	53.10	-18.6		4.0			.039	.038	1.49	
A1001+14	10 1.3	14 27	222.66	86.2	.SXS5..	5	PG48C						
	5.43	-29.1	48.98	-34.5									
A1001+66	10 1.30	66 47.9	144.14	43.5	.I..9..	10	P048F			1.03	.00	1.03	
	7.61	-29.2	43.10	-6			1.6			.050	.050	1.04	
O 71	1.59	-27 19.5	263.23	139.9	.SXT5..	5	W100V			1.43	.14	1.39	
12537	4.59	-29.1	22.10	-44.8	S 6	8	3.5		3 S	.037	.029	1.43	
A1001+13	10 1.7	13 52	223.52	86.9	.S...4*.	4*	PG48C			.90	.09	.87	
	5.41	-29.1	48.82	-34.8			1.6			.039	.038	.89	
N3136A	10 2.1	-67 13	287.85	187.5	.S...\$.		S030V						
	2.55	-29.0	-9.65	-30.1									
N3113	10 2.17	-28 12.0	263.94	141.1	.SAR7\$.	7	P048C			1.51	.32	1.44	
	4.57	-29.1	21.51	-44.6			2.3			.037	.034	1.47	
N3115	10 2.74	-7 28.5	247.79	112.4	.L...-/	-3	P200V	D K	3	1.92	.42	1.82	1.05
	5.01	-29.2	36.78	-42.9	E 6		4.8		4	.032	.022	1.86	.03
A1003+29	10 3.4	29 12	200.15	72.5						.77	.03	.76	
	5.74	-29.2	53.69	-25.8						.042	.045		
A1003+77	10 3.70	77 9.1	133.55	36.3									
MK136	9.61	-29.4	36.65	6.8									
N3124	10 4.29	-18 58.6	257.71	128.2	.SXT4..	4	W100V			1.50	.07	1.49	
	4.79	-29.3	28.83	-44.3	SX4	1*	3.7	S F	3VS	.032	.027	1.52	
N3125	10 4.30	-29 41.5	265.33	143.1	.E.3.\$.	-5\$	P048C			1.17	.25	1.11	
	4.55	-29.3	20.64	-44.0	E 5		1.7			.075	.100	1.18	
N3136	10 4.52	-67 8.0	287.99	187.3	.E.4*.*.	-5*	S030V		3	1.40	.17	1.36	0.92
	2.61	-29.2	-9.45	-29.9			2.4			.129	.063	1.66	.06
A1004+10	10 4.7	10 36	228.39	90.8	.I.0.\$.	0\$	P048N			1.28	.27	1.22	
	5.34	-29.3	47.95	-35.7			1.9			.039	.038	1.25	
A1004+53	10 4.8	53 20	160.85	53.5	.SBS5\$.	5	P048C			1.66	.59	1.52	
	6.54	-29.4	50.26	-9.7			2.3			.039	.058	1.54	
A1004+52	10 4.9	52 6	162.61	54.4	.SBT7..	7	P048N			1.39	.02	1.38	
	6.48	-29.4	50.77	-10.5			2.3			.039	.038	1.40	
A1005+29	10 5.25	29 47.3	199.24	72.3	.S...9..	9	P048N			1.19	.19	1.14	
O 72	5.74	-29.4	54.16	-25.1	S	9*	1.8			.039	.038	1.15	
A1005+12	10 5.77	12 33.2	225.99	88.9	.E.3...-	-5	P048C			2.03	.11	2.00	
	5.38	-29.4	49.11	-34.6	E		3.5			.051	.045	2.03	
O 74	10 6.65	30 23.8	198.25	71.9	.I..9..	10	P048N			1.24	.02	1.24	
A1006+30	5.75	-29.5	54.53	-24.5	I	9	2.0			.046	.045	1.25	
N3140	10 7.1	-16 22	256.27	124.7	.S...5..	5	P048C			1.14	.13	1.11	
	4.85	-29.5	31.22	-43.4			1.7			.061	.058	1.14	
12554	10 7.5	-66 48	288.03	186.8	.SBS5P*	5*	S030V			1.51	.33	1.43	
	2.71	-29.4	-9.01	-29.9			2.5			.129	.079	1.61	
N3143	10 7.62	-12 20.1	253.09	119.2	.SBS3..	3	W100V			.95	.09	.93	
	4.92	-29.5	34.24	-42.7			2.6			.058	.053	.96	
N3145	10 7.72	-12 11.3	252.99	119.0	.SBT4..	4	W100V		3	1.52	.28	1.45	
	4.93	-29.5	34.37	-42.7	S 4	1	3.6	S *F *	4 S	.042	.031	1.48	
A1008-25	10 8.27	-25 34.7	263.28	137.4	.S...9*.	9*	P048N			1.33	.09	1.31	
O237	4.66	-29.5	24.40	-43.4		9	2.1			.046	.045	1.33	
A1008+59	10 8.44	59 8.3	152.63	49.6	.P...\$.		P048N			.60	.19	.56	
MK 26	6.82	-29.6	48.00	-5.3			.6			.039	.038	.59	
A1008+58	10 8.53	58 58.9	152.82	49.7	.P.....		P048N			.55	.27	.49	
MK 27	6.81	-29.6	48.10	-5.4			.4			.050	.050	.52	
A1008-04	10 8.57	-4 27.7	246.19	109.0	.IB.9..	10	P200V			1.68	.07	1.67	
D 75	5.07	-29.6	39.88	-40.6	I	9	4.7			.027	.019	1.68	
A1008-13	10 8.70	-13 32.0	254.32	120.9	.I..9..	10	P048F			1.32	.37	1.24	
O 76	4.90	-29.6	33.56	-42.6	I	9*	1.8			.061	.058	1.25	
A1009+58	10 9.00	58 38.7	153.21	50.0									
MK 28	6.78	-29.7	48.32	-5.6									
A1009+67	10 9.30	67 39.5	142.56	43.4	.P...\$.		P048N			1.07	.66	.91	
MK138	7.55	-29.7	43.19	.6			1.1			.071	.071	.94	
N3136B	10 9.9	-66 44	288.19	186.6	.E.5...-	-5	S030V			1.37	.21	1.32	
	2.77	-29.6	-8.81	-29.7			2.3			.224	.105	1.65	
N3156	10 10.10	3 22.7	238.27	99.7	.L...*.	-2*	W060V			1.33	.24	1.27	
	5.21	-29.7	45.13	-37.6	E 5P	-*	2.8			.046	.039	1.30	
N3153	10 10.2	12 55	226.26	89.2	.S...6*.	6*	P048N			1.37	.32	1.29	
	5.38	-29.7	50.23	-33.4			2.0			.039	.038	1.31	
N3151	10 10.53	38 51.9	183.49	65.3	.LA...*	-2	P048C			1.00	.22	.95	
	5.95	-29.7	55.21	-18.6			1.4			.041	.043	.98	
N3152	10 10.61	39 5.3	183.10	65.2	PLB.0*	-2	P048C			1.00	.09	.98	
	5.95	-29.7	55.20	-18.4			1.5			.041	.043	1.01	
N3162	10 10.75	22 59.2	211.04	79.2	.SXT4..	4	W100V	S F	4 S	1.49	.06	1.48	1.05
	5.57	-29.7	54.08	-28.1	S 5	3*	3.7	S F		.030	.024	1.50	.03
N3158	10 10.88	39 0.7	183.22	65.3	.E.3*.*.	-5*	W100V			1.37	.04	1.36	0.96
	5.95	-29.8	55.26	-18.4	E 2		3.5	F3 K		.061	.045	1.39	.03
N3165	10 10.92	3 37.5	238.16	99.5	.SAS8*.	8	P048C			1.20	.26	1.14	
	5.21	-29.7	45.45	-37.3			1.7			.036	.034	1.15	
N3159	10 10.92	38 54.1	183.41	65.4	.E.2.P*	-5	P048C			1.11	.03	1.10	0.60
	5.95	-29.8	55.28	-18.5			1.8			.049	.049	1.13	.06

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m_H m.c. (15)	B_T m.e. (16)	m_B' m.25 (17)	A_B B_T (18)	$(B-V)_T$ m.e. (19)	$(U-B)_T$ m.e. (20)	$(B-V)_B'$ m.e. (21)	$(U-B)_B'$ m.e. (22)	$(B-V)_T^2$ $(U-B)_T$ (23)	$\log S_R$ $N_N N_H N_V$ (24)	α_+ α_+ (25)	$\log S_H$ $N A_{21}$ (26)	RI HI (27)	V $N_H N_0$ m.e. (28)	V_0 ΔV (29)	
N3095	12.7			.50						1.66*						
N3091	12.40		14.3	.34						0 1 2	-.07%					-283
A0958-14	12.7		13.9	.30										9072	-259	
N3100	12.47			.50										1 1 14	8826	-246
N3079	11.9	11.20		.24	.64				.46	1.92	.77	*	1.36	1137	-283	PT
	11.47	.11	13.8	10.43	.07					4 4 4	.80			0 1 58	1212	75
N3077	11.4	10.65	12.4	.30	0.80	0.15	0.70	0.05	.72			2.20		10	148	PT
N3098	11.09	.08	13.5	10.28	.03	.05	.02	.03	.08			1.01	.79	2 2 9	138	
A0959+43	13.0	12.85	11.8	.20	0.88	*	0.91	0.43								
	12.96	.09	13.4	.22	.04		.03	.06								
N3057				.38										5396	5407	
A1000+59		14.6		.25	.54	-.23						.70		0 2 71	11	
72308		.15		.25	.06	.07						1.01		1530	1718	
N3109	11.2*			.41										1 0 15	188	
N3104	10.39		14.5	.21										0 1 95	3079	
V119				.20								2.81		404	131	PT
A1001+14				.20								5.04		6 1 4	-273	
				.20								1.12		637*	637	P
A1001+66		15.9		.28	.92							1.01		1 1 17	-0	
I2537	12.8	12.9	15.9	.42	.06	.13								8961	8828	
	12.62	.15	14.5	.20	.72	.07								0 1 59	-133	
A1001+13				.20	.06	.07										128
N3136A				.20										2713	2577	
N3113				.44										0 1 41	-136	
N3115	9.8	10.05	10.8	.26	0.95	0.57	1.00	0.62	.87							-277
A1003+29	9.52	.09	13.5	9.70	.02	.05	.01	.05	.49			1.06		698	476	PT
		14.6		.20	.35	-.07						2.10	3.99	2 6 6	-222	
		.15		.35	.06	.07								1402	1341	
A1003+77				.35										0 1 57	-61	
N3124	12.8			.33										10073	10247	
N3125	12.35		14.5	.46										0 1 100	174	
	13.0			.20										3341	3085	
N3136	13.12		13.3	1.94	1.05	*	1.06	0.59	.61					0 1 35	-256	
	12.4	12.05	12.1	10.98	.05		.04	.06								-279
A1004+10	12.18	.13	13.6	.21										1691	1410	T
				.23										0 1 78	-281	
A1004+53				.23												-150
A1004+52				.20												62
A1005+29				.20												56
A1005+12	11.11			.20	0.97											-57
A1006+30	.11	16.0		.20	.07											-141
				.31								.60		1372	1318	
N3140				.20								1.01		1 0 15	-54	
I2554				2.07										8458	8209	
N3143				.28										0 1 50	-249	
N3145	12.5			.28										1367	1086	
A1008-25	12.35		14.1	.39										0 1 35	-281	
				.25										3855	-237	PT
				.25								.49		0 1 67	3619	
A1008+59				.25								1.01		2517	-236	
A1008+58				.25										1 0 10	2246	
A1008-04		11.875		.24	.41				.33							-271
A1008-13	.06	14.9	11.56	.29	.07							2.05		9132	9224	
A1009+58				.25								3.01	-.12	0 1 100	92	PT
				.29										2178	2269	
A1009+67				.21										0 2 39	91	
N3136B				2.14										326	116	
N3156	13.1	*		.22	*	*								4 2 5	-210	
N3153	13.03		13.9	.20										9092	-240	
N3151				.21										0 2 39	9181	
N3152				.21											89	
N3162	12.3	12.15	12.9	.20	0.60		0.58		.53					4477	4609	
N3158	12.03	.06	14.3	11.89	.02		.02							0 1 220	132	PT
	12.7	12.85	13.1	.21	1.01	0.57	1.02	0.61	.90							-281
N3165	12.37	.04	14.6	12.53	.02	.04	.01	.03	.56							-179
				.21										7165	7155	
N3159	14.4	12.9	.21	0.99	1.00		.88							0 1 81	-10	
	.1	14.9	14.09	.03	.03									6496	6487	
														0 1 138	-9	P
														1456	1366	
														0 1 65	-90	
														7024	7015	
														0 1 50	-9	
																-178
														6950	6940	
														0 1 65	-10	

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log Do (12)	Log Ae m.e. (13)	
N3161	10 11.03	38 54.3	183.40	65.4	.E.2...	-5	P048C			.99	.13	.96		
	5.94	-29.8	55.30	-18.5			1.4			.050	.050	.99		
N3166	10 11.16	3 40.5	238.15	99.5	.SXT0..	0	W060V	SD *G	3	1.72	.29	1.65	*	
	5.21	-29.8	45.52	-37.3	S N +		3.5		4VS	.035	.026	1.68		
N3163	10 11.16	38 54.0	183.41	65.4	.LA.-*	-3	P048C			1.15	.00	1.15	0.60	
	5.94	-29.8	55.33	-18.4			1.9			.049	.047	1.18	.06	
N3144	10 11.19	74 28.2	135.62	38.5	.SBS1SP	1	P048C			1.15	.19	1.10		
	8.61	-29.4	38.82	5.3			1.7			.038	.035	1.14		
N3169	10 11.63	3 43.2	238.20	99.5	.SAS1P.	1	W060V	S GK	3	1.68	.18	1.64	1.10	
	5.21	-29.8	45.64	-37.1	S 3 NT		3.5		4 S	.036	.026	1.66	.04	
A1012+55	10 12.4	55 55	156.47	52.3	.SBR3*.	3	P048C							
	6.58	-29.9	50.08	-7.1										
N3175	10 12.42	-28 37.3	266.13	141.4	.SXS1S.	15	W100V			1.68	.45	1.57		
	4.61	-29.8	22.58	-42.3	S 3	5	3.7		3VS	.039	.033	1.62		
A1012+21	10 12.5	21 21	213.93	81.0										
	5.53	-29.8	54.00	-28.6										
N3147	10 12.66	73 39.0	136.30	39.2	.SAT4...	4	W060V	S FG	4	1.60	.05	1.59	1.05	
	8.39	-30.0	39.46	4.8	S 3	2*	3.5	S GK	4	.030	.025	1.62	.05	
A1012+44	10 12.77	44 2.2	174.51	61.5						.87	.06	.85		
MK139	6.09	-29.9	54.64	-14.9						.075	.100			
A1013+45	10 13.41	45 34.3	171.92	60.3						.66	.18	.62		
MK140	6.13	-29.9	54.32	-13.8						.050	.050			
N3177	10 13.82	21 22.4	214.03	81.2	.SAT3...	3	W100V	S G	4	1.22	.09	1.20	*	
	5.53	-29.9	54.30	-28.4	S 4	4	3.2	S P	4VS	.035	.030	1.22		
A1014+60	10 14.47	60 18.6	150.54	49.2										
MK 29	6.81	-30.0	48.01	-4.0										
A1014+15	10 14.6	15 45	222.94	86.8										
MK629	5.42	-30.0	52.44	-31.1										
N3185	10 14.89	21 56.2	213.22	80.8	.RSBR1..	1	P200V	R F	4S	1.36	.16	1.32	*	
	5.53	-30.0	54.70	-27.8	SX4	5*	4.0	RD FG	4 S	.031	.024	1.34		
N3187	10 15.04	22 7.5	212.94	80.7	.SBS5P.	5	P200V	R P*A		1.52	.34	1.44	1.00	
	5.54	-30.0	54.79	-27.7			4.1		1	.032	.024	1.46	.05	
N3184	10 15.28	41 40.0	178.36	63.7	.SXT6...	6	W100V	S AF	4	1.84	.01	1.84	*	
	5.99	-30.0	55.64	-16.1	S 5	3	4.5	S F	4 S	.027	.019	1.86		
N3190	10 15.35	22 5.1	213.04	80.7	.SAS1P/	1	P200V	S GK	4	1.66	.10	1.57	0.88	
	5.54	-30.0	54.85	-27.7	S 3 NT	4*	4.3	SOP K		.030	.022	1.59	.03	
A1015+64	10 15.65	64 13.2	145.79	46.4	.E.-3.5.	-5*	P048C						*	
MK141	7.09	-30.1	45.83	-1.3										
N3193	10 15.66	22 8.6	212.97	80.7	.E.2...	-5	P200V	E2 K	3	1.45	.04	1.45	0.95	
	5.54	-30.0	54.94	-27.6	E 0		4.3	E2 K		.051	.029	1.48	.03	
I0602	10 15.7	7 18	234.75	95.9	.S...*		P048N			1.03	.18	.99		
	5.27	-30.0	48.53	-34.8			1.5			.039	.038	1.01		
N3191	10 16.0	46 43	169.81	59.7	.SBS4P.	4	P048C			.89	.15	.85		
	6.15	-30.1	54.39	-12.8			1.5			.039	.038	.87		
N3200	10 16.19	-17 44.0	259.24	126.8	.SAS2*.	2*	W060V			1.68	.43	1.58		
	4.85	-30.1	31.62	-41.4	S 3	3	3.3	S *F	3VS	.034	.029	1.61		
N3182	10 16.21	58 27.4	152.70	50.8	.SAR1S.	15	W060V			1.36	.10	1.34		
	6.67	-30.1	49.22	-5.1			3.0			.071	.071	1.37		
N3189A	10 16.32	57 40.2	153.70	51.4						.65	.16	.61		
MK 30	6.62	-30.1	49.65	-5.6						.042	.045			
N3188	10 16.40	57 40.3	153.69	51.4	.RSBR2..	2	P048N			1.03	.02	1.02		
MK 31	6.62	-30.1	49.66	-5.6			1.6			.039	.038	1.05		
N3198	10 16.87	45 48.0	171.23	60.6	.SBS5...	5	W060V	S AF	2	1.92	.35	1.84		
	6.11	-30.1	54.83	-13.2	S 5	3	3.9		4 S	.028	.020	1.86		
N3203	10 17.24	-26 22.4	265.62	139.4	.LAR.S/	-1	B060V			1.47	.63	1.32		
	4.68	-30.1	24.94	-41.4	E 8		2.7		4 S	.061	.046	1.37		
N3208	10 17.4	-25 36	265.09	137.3	.SAT4...	4	P048C			1.28	.05	1.27		
	4.70	-30.1	25.65	-41.4			2.1			.061	.058	1.30		
N3202	10 17.5	43 16	175.43	62.7	.SBR1..	1	P048N			1.16	.13	1.13		
	6.02	-30.2	55.66	-14.8			1.8			.039	.038	1.15		
N3183	10 17.55	74 25.4	135.28	38.9	.SBS4*.	4	P048C			1.40	.20	1.36		
	8.41	-30.1	39.18	5.6			2.2			.036	.029	1.39		
I2565	10 18.5	28 11	202.68	75.6										
	5.64	-30.2	56.84	-23.7										
I2565A	10 18.5	28 11	202.68	75.6										
	5.64	-30.2	56.84	-23.7										
N3206	10 18.50	57 10.9	154.10	51.9	.SBS6...	6	W060V			1.48	.15	1.45		
	6.57	-30.1	50.16	-5.7			3.2			.033	.027	1.47		
N3213	10 18.56	19 54.3	217.05	83.3	.S..5*.	5*	P048C			1.09	.09	1.07		
	5.48	-30.2	54.88	-28.2			1.7			.038	.035	1.09		
A1018-37	10 18.6	-37 32	272.77	152.9	.SAT4S.	4	P048C							
	4.43	-30.2	16.11	-39.8										
N3223	10 19.33	-34 0.8	270.88	148.3	.SAS3...	3	W100V			1.61	.20	1.56		
	4.52	-30.2	19.09	-40.2			3.8		03	.050	.032	1.61		
N3221	10 19.59	21 49.1	213.99	81.6	.SBS5*/	5	P048C			1.52	.57	1.38		
	5.52	-30.1	55.71	-27.0			2.0			.047	.043	1.40		
A1019+46	10 19.7	46 30	169.80	60.3	.SATS...	5	P048N			1.40	.26	1.34		
	6.11	-30.3	55.00	-12.4			2.1			.039	.038	1.36		
N3222	10 19.84	20 8.4	216.83	83.2	.LB...*	-2	P048C			1.13	.08	1.11		
	5.48	-30.3	55.24	-27.8			1.8			.040	.039	1.14		
N3214	10 19.86	57 17.5	153.80	52.0	.SA.0*.	0	P048C			1.02	.28	.96		
	6.56	-30.3	50.26	-5.5			1.3			.037	.032	.99		
A1020+71	10 20.18	71 7.9	138.17	41.5	.SBS8...	8	P048N			1.53	.16	1.50		
D 77	7.75	-30.4	41.62	3.6	SB	8	2.5			.039	.038	1.52		
N3220	10 20.46	57 16.7	153.75	52.0	.S..3*/	3*	P048C			1.20	.40	1.11		
	6.55	-30.4	50.33	-5.4			1.6			.036	.032	1.13		
A1020+18	10 20.5	18 12	220.04	85.2										
MK630	5.45	-30.3	54.77	-28.7										
N3226	10 20.72	20 9.2	216.93	83.3	.E.2.*P	-5*	P200V	E3 K	34	1.44	.04	1.43	1.00	
	5.48	-30.4	55.44	-27.6	E 2		4.3		03	.053	.035	1.46	.09	
N3227	10 20.78	20 7.1	217.00	83.4	.SXS1P.	1	P200V	S P G	5	1.75	.15	1.71	1.20	
	5.48	-30.4	55.45	-27.6	S 3 NT				5VS	.040	.028	1.73	.02	
A1021+15	10 21.98	15 0.6	225.32	88.6	.SB.8...	8	P048N			1.44	.12	1.42		
D 79	5.39	-30.4	53.73	-29.9	SB	8	2.3			.039	.038	1.43		
N3241	10 22.01	-32 13.7	270.21	145.9	.SAR2*.	2*	B060V			1.18	.12	1.15	0.70	
	4.58	-30.4	20.88	-39.9	S 3 NS		2.6		3 S	.054	.046	1.20	.06	
A1022+55	10 22.1	55 46	155.58	53.3	.SXS5*.	5	P048C			1.11	.04	1.10		
	6.45	-30.5	51.33	-6.2			2.1			.061	.058	1.12		
N3239	10 22.39	17 24.8	221.65	86.2	.IBS0P.	10	P200C			1.72	.15	1.68		
	5.43	-30.5	54.82	-28.7			4.4			.035	.031	1.69		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _B m _C (15)	B _T m.e. (16)	m _B m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _e (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)			
N3161				.21											6204 0 1 65	6194 -10	T	
N3166	11.6 11.28	11.50 .09		.21 11.07	0.91 .03		*		.80						1381 0 1 50	1203 -178		
N3163		14.1 .1	14.2 14.7	12.6 13.80	1.03 .03			1.05 .03		.92					6245 0 1 66	6235 -10		
N3144				.33														
N3169	11.9 11.46	11.25 .09	12.2 14.0	.21 10.88	0.80 .03	*	0.93 .04	0.68 .05	.71	.955 3 0 1	1.075	1.06 1.01	3.335 3.03		1229* 1 2 35	163 1051 -178	PT	
A1012+55				.24											7224 0 1 32	7300 76		
N3175	12.1 11.84	12.2 .15	14.3	.42 .20	.91 .06	.23 .07	*									-276 6068	PST	
A1012+21 22 44				.20											6166 0 1 105	-98		
N3147	11.9 11.51	11.45 .08	12.2 14.2	.32 11.07	0.80 .04		0.85 .06		.70						2721 0 1 80	2881 160		
A1012+44				.21											5200 0 2 39	5216 16		
A1013+45		15.4 .15		.21	.44 .06	-.40 .07									1643 0 3 34	1667 24	S	
N3177	12.8 13.02	13.00 .06	13.7	.20 12.72	0.68 .02	0.09 .03	*	*	.61 .04						1220 0 1 65	1123 -97		
A1014+60				.25											9210 0 1 100	9308 98	PT	
A1014+15				.20											9725 0 1 100	9601 -124		
N3185	12.7 12.72	12.95 .09	14.2	.20 12.61	0.80 .03		*		.71	1.20* 1 1 0	.195		.985		1241 0 1 65	1147 -94		
N3187 V307 N3184		13.6 .13	14.1 15.2	.20 13.12	0.50 .04	-.26 .05	0.50 .04	-.19 .05	.38 -.35						1594 0 1 22	1500 -94		
N3190 V307 A1015+64	11.8 10.94 12.1 11.83	10.40 .08 11.95 .08	14.4 11.8 14.1	.21 10.18 11.41	0.65 .04 0.97 .02		*		.60			1.91 2.01	1.61		589* 2 2 8	593 1216	PT	
		15.25 .09		.27	0.65 .03	-.30 .05	*	*	.33						1310 0 2 38	-94		
N3193	12.6 12.09	11.85 .05	12.1 14.0	.20 11.63	0.93 .02	0.48 .03	0.97 .02	0.51 .02	.87 .44						11690 0 2 43	11807 117	PT	
															1371 0 1 50	1278 -93		
I0602				.21													P	
N3191				.21														
N3200	12.8	*		.31	*	*									9115 0 1 28	9145 30	S	
N3182	12.29		14.5	.24												-250		
N3188A				.24												89	PST	
															8070* 0 2 39	8156 86		
N318A		*		.24	*	*									7777 0 2 39	7863 86		
N3198	11.7 10.96 13.2 13.03	10.94 .11		.21 10.45 .39	.54 .07				.42			1.97 2.02	1.17		665 2 1 12	691 26		
N3203			13.7	.38												-271	T	
N3208				.21											3007 0 1 20	2738 -269		
N3202				.21											6715 0 1 59	6728 13		
N3183		12.70 .11	14.0	.33												163		
I2565 I2 24 I2565A I2 24 N3206		*		.20	*	*									14777 0 1 105	14714 -63	T	
				.20	*	*									15233 0 1 105	15170 -63		
				.24								1.25 1.01			1162 1 1 9	1245 83		
N3213				.19												-103		
A1018+37				.58													T	
N3223	12.1 11.79	*		.50	*	*									7633 0 1 20	7346 -287		
N3221			14.2	.19											2857 0 2 38	2574 -283		
A1019+46				.21												-94		
N3222		13.7 .15	14.0	.19 13.39	.93 .06				.83						5056 1 1 10	5086 30	S	
															5577 0 1 40	5475 -102		
N3214				.24														
A1020+71				.30								1.04 1.01			1012 1 0 10	1161 149		
N3220				.24												84	P	
A1020+18				.19												3560 0 1 100		3449 -111
N3226 V209	12.8 12.27	12.3 .13	12.8 14.4	.19 12.09	0.93 .05	*	0.95 .04	0.53 .06	.87						1356 0 3 13	1254 -102		
N3227 V209 A1021+15	12.2 11.48	11.55 .08	13.0 14.8	.19 11.23 .19	0.80 .02	0.30 .05	0.84 .01	0.25 .05	.72 .24	1.26 1 2 4	.385 1.13	.75 2.01 2.01	2.23 3.46		1152* 2 3 14 2 0 9	1050 -102 1260 -126		
N3241	13.0 13.29	13.6 .13	12.6 14.0	.46 13.02 .23	0.92 .05	0.27 .05	0.97 .04	0.34 .04	.77 .15						2834 0 1 44	2554 -280	T	
A1022+55															7591 0 1 30	7668 77		
N3239 V-95		*		.19	*										880 0 1 48	766 -114	P	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL (5)	Rev. type DDO type (6)	T (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ (11)	Log R ₂₅ (12)	Log D(1) Log D ₀ (13)	Log Ae m.e. (14)
A1022+67 D 78	10 22.80 7.29	67 54.7 -30.5	141.14 44.00	44.1 1.7	.I..9..	10 9	P048F						
A1023+13	10 23.1 5.37	13 58 -30.5	227.10 53.50	89.8 -30.2	.SAR.*.		P048N			1.08	.19	1.04	
A1023+14	10 23.2 5.38	14 37 -30.5	226.14 53.82	89.2 -29.9	.S.....		P048N 2.0			.039	.038	1.06	
N3244	10 23.3 4.41	-39 35 -30.5	274.74 14.91	155.2 -39.5	.SA57..	7	S030C			1.46	.50	1.34	
N3238	10 23.45 6.52	57 28.8 -30.5	153.14 50.56	52.1 -5.0	.LAR0*.	-2	P048C 2.0			.039	.038	1.36	
A1023+62 MK143	10 23.47 6.82	62 35.4 -30.6	146.86 47.53	48.2 91.7						1.27	.05	1.26	
N3256A	10 23.7 4.31	-43 29 -30.5	276.98 11.67	160.0 -37.5	.S...9S.	9S	P048C			.141	.095	1.30	
10610	10 23.75 5.48	20 29.0 -30.5	216.79 56.22	83.4 -26.9	.S...4./	4	P048C			1.20	.32	1.12	
A1023+56 MK 32	10 23.80 6.46	56 31.5 -30.6	154.36 51.13	52.9 -5.5	.P.....		P048N .6			.158	.100	1.16	
A1023+44 MK144	10 23.90 6.00	44 15.7 -30.6	173.14 56.49	62.0 -13.2						1.31	.66	1.16	
N3245A	10 24.21 5.63	28 53.8 -30.6	201.65 58.17	75.7 -22.3	.SB53./	3	W100V			1.5	.038	1.18	
N3250	10 24.35 4.42	-39 41.4 -30.5	274.98 14.93	155.3 -38.3	.E.4...-	-5	S030V			.61	.22	.56	
A1024+20	10 24.5 5.48	20 42 -30.6	216.53 56.46	83.3 -26.6						1.50	.17	1.46	1.05
N3245	10 24.50 5.63	28 45.8 -30.6	201.91 58.22	75.8 -22.3	.LAR0* E 5	-2*	W100V	D GK	34	.224	.112	1.56	.05
I2574 D 81	10 24.67 7.34	68 40.1 -30.6	140.22 43.60	43.6 2.3	.SXS9..	9	P200V		5	1.55	.90	1.33	
A1025+19	10 25.2 5.46	19 45 -30.6	218.24 56.30	84.3 -26.9	S	8				.036	.032	1.35	
N3250B	10 25.5 4.41	-40 10 -30.6	275.44 14.65	155.9 -37.9	.SB.1S.	1	P048C			1.50	.17	1.46	
N3250C	10 25.5 4.42	-39 45 -30.6	275.20 15.00	155.3 -38.0	.SA.0*.	0	P048C			1.51	.24	1.46	0.85
N3250A	10 25.7 4.42	-39 49 -30.6	275.27 14.97	155.4 -38.0	.S..1S/	1S	P048C			.051	.035	1.49	.07
N3250D	10 25.7 4.43	-39 33 -30.6	275.13 15.19	155.1 -38.0	.L.....	-2	P048C			2.09	.32	2.02	
N3256	10 25.70 4.32	-43 38.9 -30.6	277.38 11.73	160.1 -37.1	.P.....		C060C			.033	.025	2.04	
A1025+40 MK415	10 25.78 5.87	40 5.6 -30.7	180.40 57.91	66.2 -15.5						.58	.06	.57	
N3253	10 25.8 5.35	12 57 -30.6	229.13 53.60	91.2 -30.1	.SXT4..	4	P048N			.075	.100		
I2580	10 26.0 4.62	-31 15 -30.6	270.37 22.16	144.6 -39.2	.SBT4..	4	P048N			1.51	.56	1.38	
N3258A	10 26.1 4.54	-35 13 -30.6	272.73 18.87	149.6 -38.7	.S..0*.	0*	P048C			.129	.069	1.45	
N3257	10 26.52 4.54	-35 24.2 -30.7	272.92 18.76	149.8 -38.6	.LXS-*.	-3*	B060V			1.43	.48	1.32	
N3254	10 26.53 5.64	29 44.9 -30.7	200.12 58.76	75.2 -21.4	.SAS4..	4	P200V	S FG	4	.158	.088	1.39	
A1026+70A D 80	10 26.61 7.48	70 18.4 -30.7	138.46 42.57	42.5 3.5	S 3	3	4.4	S G	4 S	1.35	.69	1.19	
N3258	10 26.63 4.54	-35 21.0 -30.7	272.91 18.82	149.4 -38.5	.SB.9*.	9*	P048N			1.3	.183	1.26	
N3250E	10 26.8 4.43	-39 50 -30.7	275.47 15.06	155.4 -37.8	.E.1...-	-5	B060V			1.35	.55	1.22	
A1026+70B D 82	10 26.80 7.55	70 52.5 -30.8	137.90 42.18	42.0 3.8	.SB57*.	7	P048C			1.35	.55	1.22	
N3260	10 26.85 4.54	-35 20.4 -30.7	272.94 18.85	149.8 -38.5	.S..9..	9	P048N			.183	.100	1.30	
N3261	10 26.88 4.31	-44 24.1 -30.7	277.97 11.20	161.0 -36.7	.E.2*.	-5*	B060V			1.5	.026	1.50	
N3256B	10 26.9 4.31	-44 8 -30.7	277.83 11.43	160.6 -36.8	.SBT3..	3	B060V			.046	.045	1.52	
N3256C	10 26.9 4.33	-43 36 -30.7	277.54 11.88	160.0 -36.9	.SBT7..	7	B060V			1.26	.04	1.25	0.8
N3262	10 27.1 4.32	-43 55 -30.7	277.74 11.63	160.4 -36.8	.LX...*	-3*	B060V			.120	.061	1.33	.09
A1027+16 MK631	10 27.1 5.40	16 26 -30.7	224.02 55.45	87.8 -28.2	.SB57*.	7	P048C			1.23	.12	1.20	
N3263	10 27.2 4.32	-43 53 -30.7	277.74 11.67	160.3 -36.8	.S..0*.	0*	P048C			.224	.120	1.18	
A1027+35A	10 27.27 4.55	-35 0.2 -30.7	272.82 19.18	149.3 -38.5	.S..9..	9	P048N			1.53	.21	1.48	
N3267	10 27.57 4.55	-35 4.0 -30.7	272.91 19.16	149.4 -38.4	.E.2*.	-5*	B060V			.039	.038	1.50	
I2584	10 27.6 4.56	-34 39 -30.7	272.68 19.51	148.9 -38.5	.SBT6*.	6	B060V			1.10	.05	1.09	
A1027+35B	10 27.62 4.55	-35 7.2 -30.7	272.95 19.12	149.4 -38.4	.LXR0..	-2	B060V			.183	.091	1.17	
N3269	10 27.70 4.55	-34 58.1 -30.7	272.88 19.26	149.3 -38.4	.L..../	-2	P048C			1.61	.11	1.58	
N3268	10 27.77 4.55	-35 4.2 -30.7	272.95 19.18	149.4 -38.4	.SB.5S.	5*	P048C			.059	.037	1.66	
N3258B	10 28.1 4.55	-35 18 -30.8	273.14 19.02	149.7 -38.3	.E.2...-	-5	B060V			1.25	.42	1.15	
N3271	10 28.20 4.55	-35 6.2 -30.8	273.05 19.20	149.4 -38.3	.SBT7..	7	B060V			.158	.095	1.22	
N3273	10 28.23 4.55	-35 21.4 -30.8	273.20 18.99	149.7 -38.2	.L..../	-2	P048C			1.16	.08	1.14	
N3265	10 28.31 5.41	29 3.3 -30.8	201.52 59.08	76.1 -21.4	.LX...*	-3*	B060V			.095	.061	1.19	
N3275	10 28.65 4.53	-36 29.0 -30.8	273.92 18.09	151.1 -38.0	.SBT6*.	6	B060V			1.07	.06	1.06	
I2587	10 28.7 4.57	-34 18 -30.8	272.68 19.93	148.4 -38.3	.SA.0*.	0*	P048C			1.58	.075	1.17	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m_H m_C (15)	B_T m.e. (16)	m'_e m'_{28} (17)	A_B B'_T (18)	$(B-V)_T$ m.e. (19)	$(U-B)_T$ m.e. (20)	$(B-V)_B$ m.e. (21)	$(U-B)_B$ m.e. (22)	$(B-V)_T^0$ $(U-B)_T^0$ (23)	$\log S_R$ $N_N N_N N_+$ (24)	α_- α_+ (25)	$\log S_H$ $N A_2$ (26)	RI HI (27)	V $N_N N_0$ m.e. (28)	V_0 ΔV (29)	
A1022+67				.28											135	
A1023+13				.19											-130	P
A1023+14				.19											-127	
N3244				.62											-288	
N3238				.24											86	
A1023+62				.26										9562*	9672	
N3256A				.76										0 2 71	110	
I0610				.19											-291	
A1023+56				.24										878	-99	
A1023+44				.21										0 2 39	959	
														8282	81	
N3245A				.20										0 2 39	8301	
N3250	12.4	12.10	12.8	.62	1.07	0.54	1.09	0.58	.90						-58	
A1024+20	11.95	.08	14.2	11.44	.04	.06	.03	.06	.41					2833	2545	T
				.19										0 1 37	-288	
N3245	12.0	11.70	11.4	.20	0.88	*	0.92	0.50	.80					5785	5687	S
I2574	11.87	.09	13.5	11.39	.04		.05	.06						0 1 105	-98	
72330		11.03	.29	.47	.07				.33					1261	1203	PT
		.11	15.5	10.45								2.36		0 1 30	-58	
A1025+19				.19								3 .02	.19	5 1 5	185	PT
27 47														12405	12302	
N3250B				.63										0 1 105	-103	
N3250C				.62											-288	
N3250A				.62											-288	
N3250D				.61											-288	
															-288	
N3256	12.1	12.00	11.8	.76	0.67	-.15	0.65	-.23	.43	1.765	.735		1.165	2886	2595	P
V 65	11.98	.12	13.9	11.03	.04	.04	.03	.03	-.29	1 0 5	.735			0 3 17	-291	
A1025+40				.20										8821	8820	
N3253				.19										0 2 71	-1	
I2580				.44										9685	9551	P
N3258A				.51										1 1 18	-134	
														3137	2860	
N3257				.51										0 1 20	-277	
															-283	
N3254	12.6	12.2	.15	.20	.66				.52					3023	2740	T
A1026+70A	12.13	.15	14.5	11.64	.06									0 1 50	-283	
72331=V294				.30										1228	1175	S
N3258	13.0	12.80	12.3	.51	1.08	0.48	1.09	0.52	.94			.82		0 1 60	-53	
N3250E	12.82	.08	14.0	12.25	.03	.04	.03	.04	.37			1 .01		1917	2063	
				.62										1 0 15	146	
A1026+70B				.30										2808	2525	T
N3260				.51										0 1 23	-283	
N3261	12.8			.79											-288	
N3256B	12.16		14.8	.78										2413	149	T
N3256C				.75										0 1 40	2130	
														2572	-283	T
N3262				.77										0 1 37	-291	
A1027+16				.19											-291	
N3263				.77										3215	3097	
A1027-35A				.50										0 1 100	-118	
N3267				.50											-291	
I2584				.49										1852	1569	T
A1027-35B				.50										0 1 37	-283	
N3269				.50										3709	3426	T
														0 1 33	-283	
N3268	13.0	12.85	12.6	.50	1.08	0.52	1.09	0.57	.94						-282	
N3258B	12.74	.08	14.2	12.31	.03	.06	.03	.06	.41					1741	1458	T
				.50										0 1 24	-283	
N3271	12.9	12.85	12.3	.50	1.12	0.50	1.14	0.54	.94					3754	3472	T
N3273	12.87	.08	13.8	12.17	.03	.06	.03	.06	.36					0 1 33	-282	
N3265				.19										2761	2479	T
N3275	12.8			.53										0 1 33	-282	
I2587	12.49		14.4	.48											-283	
														3784	3502	T
														0 1 15	-282	
														2419	2136	T
														0 1 52	-283	
															-56	
														3202	2918	T
														0 1 30	-284	
															-281	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(DO) Log Do (12)	Log A _g m.e. (13)
N3259	10 29.08 6.93	65 18.1 -30.9	143.27 46.22	46.5 .5	.SXT4* 1 9p	4* 7*	W060V 1.8	SD *G 2.9	4 3VS	1.37 .034	.23 .029	1.31 1.33	
N3258C	10 29.13 4.56	-34 57 -30.8	273.13 19.43	149.2 -38.1	.SBR75. 1.5	7*	P048C 1.5			1.18 .183	.13 .120	1.15 1.18	
A1029+54 MK 33	10 29.37 6.31	54 39.4 -30.9	156.21 52.80	54.9 -6.1	.1..9P* 3.2	10	P200C 3.2			1.05 .039	.02 .038	1.05 1.06	*
N3274	10 29.50 5.59	27 55.6 -30.9	203.76 59.21	77.2 -21.8	.SX.6* S S K	6	P048C 2.0	1 P*		1.34 .035	.28 .030	1.28 1.29	0.88 .05
N3258D	10 29.6 4.56	-35 9 -30.8	273.33 19.32	149.4 -38.0	.S..3* 1.6	3*	P048C 1.6			1.28 .158	.24 .095	1.22 1.27	
N3281	10 29.60 4.57	-34 36.0 -30.8	273.02 19.78	148.7 -38.1	.SAS35. 1.8	3	S030V 2.0			1.52 .082	.27 .053	1.46 1.51	1.11 .03
N3266	10 29.82 6.89	65 0.5 -30.9	143.50 46.48	46.8 .4	.LX.05. 2.7	-2	W060V 2.7			1.23 .040	.08 .038	1.21 1.25	
N3277	10 30.13 5.60	28 46.2 -30.9	202.15 59.45	76.6 -21.2	.SAR2.. S 2	2	W100V 2.4	SD *G S P*K *	3VS 4VS	1.31 .039	.04 .032	1.30 1.32	0.85 .03
N3258E	10 30.2 4.58	-34 43.9 -30.9	273.19 19.75	148.8 -37.9	.S..9P* 1.3	9*	P048C 1.3			1.25 .183	.46 .112	1.14 1.17	
N3252	10 30.37 7.93	74 1.3 -31.0	134.81 40.05	39.7 6.0	.SB.65/ 1.8	6	P048C 1.8			1.33 .038	.45 .035	1.22 1.24	
N3285A	10 30.47 4.72	-27 15.9 -30.9	268.81 26.01	139.4 -38.4	.SXT7.. 26.01	7	P048C 2.0			1.15 .055	.08 .048	1.13 1.16	
N3281C	10 30.7 4.58	-34 39 -30.9	273.25 19.86	148.7 -37.8	.L...P/ 1.3	-2*	S030V 1.3			1.29 .316	.57 .141	1.16 1.23	
N3285	10 31.25 4.73	-27 11.8 -30.9	268.92 26.16	139.3 -34.2	.SBS1P. S N *	1	B060V 3.0		5 S	1.39 .053	.17 .045	1.35 1.39	
A1031+11	10 31.3 5.31	11 28 -30.9	232.45 54.02	93.4 -29.5	.S..6* 1.6	6*	P048N 1.6			1.03 .050	.04 .050	1.02 1.03	
N3289	10 31.9 4.5R	-35 4 -31.0	273.71 19.64	149.2 -37.5	.SB.55/ 1.3	55	S030V 1.3			1.34 .183	.65 .129	1.19 1.23	
N3281D	10 32.0 4.60	-34 8 -31.0	273.20 20.44	148.1 -37.6	.SB.7*/ 1.2	7	P048C 1.2			1.35 .183	.73 .129	1.18 1.21	
N3287	10 32.06 5.47	21 54.5 -31.0	215.39 58.51	83.2 -24.5	.SBS7.. S K	7	W100V 3.2	BI *A I A *	2VS	1.34 .035	.30 .030	1.27 1.28	
A1032+46 MK146	10 32.08 4.60	46 49.1 -31.0	167.85 56.92	61.4 -10.5						.71 .050	.05 .050	.70 1.09	
N3285B	10 32.27 4.73	-27 23.7 -31.0	269.26 26.13	139.5 -38.0	.SXR35. 2.5	3	B060V 2.5			1.12 .054	.11 .046	1.09 1.13	
A1032+63 MK147	10 32.44 6.75	63 47.7 -31.0	144.53 47.51	47.9 -1						1.20 .050	.73 .050	1.03 1.06	
A1032+44 MK148	10 32.62 5.93	44 34.4 -31.0	171.64 57.86	63.3 -11.8	.P...5. 1.2		P048N 1.2			1.20 .050	.73 .050	1.03 1.06	
N3290	10 32.7 4.90	-17 0 -31.0	262.36 34.66	126.4 -37.4	.SXT4P 3.2	4	P200C 3.2			1.15 .061	.18 .058	1.11 1.14	
A1033-24 D238	10 33.00 4.78	-24 29.8 -31.0	267.58 28.62	135.9 -37.8	.SB.8.. S	8	P048N 2.5			1.50 .052	.10 .050	1.48 1.50	
N3288	10 33.22 6.45	58 49.0 -31.1	150.24 56.81	51.9 -3.1	.SX.4* 1.6	4	P048C 1.6			1.09 .044	.13 .041	1.06 1.08	
N3318A	10 33.3 4.44	-41 29 -31.0	277.45 14.30	157.1 -36.2	.S..95. 1.4	95	P048C 1.4			1.29 .141	.45 .091	1.18 1.22	
N3294	10 33.40 5.76	37 35.1 -31.1	184.62 59.84	69.2 -15.8	.SAS5.. S 5	5	W100V 3.6	S AF S AF*	2 D3VS	1.52 .030	.26 .024	1.46 1.48	
A1033-27	10 33.72 4.74	-27 15.1 -31.1	269.47 26.42	139.4 -37.7		-5*							
N3299	10 33.74 5.33	12 58.0 -31.1	230.74 55.29	92.2 -28.3	.SXS8.. 8	8	W100V 3.4		1	1.32 .042	.09 .036	1.30 1.31	
I0624	10 33.8 5.04	-8 5 -31.1	255.44 41.74	115.6 -35.5						1.52 .075	.52 .100	1.40	
N3305	10 33.9 4.75	-26 54 -31.1	269.29 26.74	138.9 -37.7									
A1033+31 D 83	10 33.90 5.64	31 48.4 -31.1	196.19 60.42	74.3 -18.9	.IBS9* I	10 9	P200C 3.5			1.31 .039	.22 .038	1.26 1.27	
N3307	10 33.93 4.74	-27 16.2 -31.1	269.52 26.43	139.4 -37.6	.SB.15P 1.3	1	P048C 1.3			1.00 .141	.29 .091	.93 .97	
N3300	10 33.97 5.35	14 25.9 -31.1	228.51 56.05	90.7 -27.6	.LXR05* SBO	-2	W100V 3.2		4	1.32 .047	.27 .042	1.25 1.28	
N3308	10 34.02 4.74	-27 10.7 -31.1	269.48 26.52	139.3 -37.6	.LXS-.. 2.8	-3	B060V 2.8		5	1.30 .158	.14 .079	1.23 1.32	0.80 .04
N3301	10 34.21 5.47	22 84.4 -31.1	215.24 59.05	83.2 -23.9	PSBT0.. S 0	0	W100V 3.5	SDP*GK DSP GK	5	1.56 .033	.47 .027	1.45 1.47	0.90 .03
N3309	10 34.24 4.74	-27 15.6 -31.1	269.58 26.48	139.4 -37.6	.E.3.. E 0	-5	B060V 2.9			1.28 .120	.04 .059	1.27 1.33	0.80 .05
A1034-17	10 34.3 4.90	-17 51 -31.1	263.35 36.21	127.5 -37.1						1.30 .075	.20 .100	1.25	
A1034-27A	10 34.33 4.74	-27 18.2 -31.1	269.63 26.45	139.4 -37.6		-5*							
N3311	10 34.36 4.74	-27 16.1 -31.1	269.61 26.49	139.4 -37.6	.LA.0* 2.3	-2	P048C 2.3			1.40 .158	.05 .077	1.39 1.44	1.05 .05
N3303.	10 34.4 5.41	18 24 -31.1	222.01 57.84	86.8 -25.7	.P..... 1.8		P200C 1.8			1.47 .039	.11 .038	1.44 1.46	
N3303A	10 34.4 5.41	18 24 -31.1	222.01 57.84	86.8 -25.7	.P..... 1.8		P200C 1.8						
N3303B	10 34.4 5.41	18 24 -31.1	222.01 57.84	86.8 -25.7	.P..... 1.8		P200C 1.8						
N3306	10 34.52 5.33	12 54.7 -31.1	230.99 55.43	92.3 -28.2	.SBS95. 95	95	W100V 2.8			1.17 .036	.37 .033	1.08 1.09	
A1034+64 MK149	10 34.68 6.76	64 31.5 -31.2	143.50 47.19	47.5 -5						.75 .050	.00 .050	1.23 1.25	
N3312	10 34.68 4.74	-27 18.4 -31.1	269.70 26.49	139.4 -37.5	.SAS3P5 S N	3	B060V 3.1		5	1.56 .046	.37 .036	1.47 1.51	
N3304	10 34.77 5.75	37 43.0 -31.1	184.27 60.09	69.3 -15.5	.SBS15. 1	1	W100V 2.9		4 S	1.24 .035	.41 .031	1.14 1.16	
N3314	10 34.86 4.74	-27 25.5 -31.1	269.81 26.42	139.6 -37.4	.SBS0P. 2.7	0	B060V 2.7		4ES	1.30 .054	.23 .046	1.25 1.30	
A1034-27B	10 34.95 4.75	-27 12.6 -31.1	269.70 26.61	139.3 -37.4		-2*				.89 .075	.38 .100	.80	
N3318	10 35.1 4.46	-41 22 -31.1	277.68 14.57	156.9 -35.9	.SXT3.. 3	3	B060V 3.0		4	1.41 .085	.23 .053	1.36 1.42	
N3316	10 35.26 4.75	-27 20.1 -31.1	269.84 26.56	139.5 -37.6	.LBT0.. 2.8	-2	B060V 2.8		5	1.09 .073	.12 .079	1.06 1.11	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _g ² (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)		
N3259	12.9			.27											1743	1867	
N3258C	12.9		14.6	.49											0 1 60	124	
A1029+54		13.5		.23	0.35	-.45	*	*	.28			.71			1446	-282	
N3274	13.0	.13	13.5	13.25	.03	.1			-.50			1.01	1.54		1 2 16	1519	
N3258D	13.03	.08	14.0	.19	0.40	-.10	0.37	-.10								73	
				.50	.03	.03	.03	.03								-61	
																-282	
N3281	12.9	12.62	13.7	.49	0.97	*	1.05	0.47	.79						3395	3114	
N3266	12.56	.08	14.4	11.89	.04		.03	.05							0 1 19	-281	
				.27												122	
N3277	12.6	12.55	12.3	.19	0.81	0.27	0.85	0.32	.75						1460	1403	
N3258E	12.63	.04	13.8	12.31	.02	.03	.02	.03	.22						0 1 75	-57	
				.49												-281	
N3252				.32												162	
N3285A				.38												-269	
N3281C				.49												-281	
N3285	13.2			.38												-269	
A1031+11	12.98	15.2	14.4	.19	.73	-.26										-269	
N3289		.15	15.1	.49	.06	.07										-139	
																-281	
N32810				.47												-280	
N3287	12.8		13.7	.19												-90	
A1032+46	12.86			.21											3340	3374	
N3285B				.38											0 2 43	34	
A1032+63				.26											7047	7164	
															0 3 38	117	
A1032+44				.21											7147	7170	
N3290				.29											0 1 220	23	
A1033-24				.35											10616	10372	
N3288				.24								1.21			0 1 150	-244	
N3318A				.65								1.01			1049	786	
															1 0 10	-263	
N3294	11.6	12.2		.20	.51				.40							94	
	11.72	.15	14.0	11.78	.06							.87			15194	1507	
A1033-27				.38								1.01	2.61		1 1 26	-12	
N3299				.19											4109	3841	
I0624				.24											0 1 37	-268	
N3305				.37												-132	
															4086	3819	
A1033+31				.19											0 1 88	-267	
N3307				.38								.87			585	544	
N3300	13.1			.19								1.01			1 0 10	-41	
N3308	13.06		13.9	.37	1.04	0.61	1.05	0.67	.92							-268	
		13.25	12.7	.37	.03	.04	.02	.03	.53						3674	3406	
N3301	12.4	.07	14.3	12.80	0.86	0.40	0.90	0.43	.73						0 2 13	-268	
	12.3	.05	13.7	11.70	.01	.04	.02	.04	.30						1333	1244	
N3309	12.7	12.9	12.4	.38	1.02	0.65	1.05	0.69	.90						0 1 75	-89	
A1034-17	12.57	.1	14.2	12.46	.04	.06	.03	.04	.58						4057	3789	
				.30											0 2 27	-268	
A1034-27A				.38												-246	
N3311		12.7	13.4	.38	1.09	0.65	1.10	0.70	.97						4698	4430	
		.1	14.4	12.25	.05	.06	.04	.06	.57						0 1 30	-268	
N3303.				.19											3593	3325	
															0 3 15	-268	
																-106	
N3303A				.19											6422	6316	
V 71				.19											0 2 49	-106	
N3303B				.19											6294	6188	
V 71				.19											0 2 49	-106	
N3306																-132	
A1034+64		14.8		.26	.71	.15									1625	1746	
77339		.15		.38	.06	.07									0 1 55	121	
N3312	13.1		14.5	.20											2774	2506	
	12.73			.37											0 3 16	-268	
N3304				.20												-11	
N3314				.38											3031	2763	
A1034-27B				.37											0 1 140	-268	
N3318	12.6		13.9	.64											4797	4529	
	12.59			.37											0 1 32	-268	
N3316															2910	2623	
															0 1 100	-287	
															3971	3703	
															0 2 55	-268	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log D ₀ (12)	Log A _g m.e. (13)
N33188	10 35.5	-41 12	277.66	156.7	.SB55..	5	B060V			1.17	.04	1.16	
	4.46	-31.1	14.76	-35.9			2.7			.158	.100	1.21	
N3310	10 35.65	53 45.9	156.61	56.1	.SXR4P.	4	W060V	S P G *	5	1.56	.09	1.54	0.6 s
	6.19	-31.2	56.06	-5.9	I	3	3.4	S P	4VS	.030	.023	1.56	.1
A1035+44	10 35.66	44 46.9	170.90	63.5						.70	.25	.64	
MK150	5.91	-31.2	58.28	-11.2						.075	.100		
N3319	10 36.24	41 56.8	175.99	65.9	.SBT6..	6	W100V	B AF	2	1.83	.24	1.77	
	5.84	-31.2	59.34	-12.8	SX5	3	4.2			.029	.021	1.79	
N3320	10 36.62	47 39.4	165.86	61.2	.S..6*.	6*	W060V	S AF	3 S	1.35	.27	1.29	
	5.98	-31.2	57.26	-9.4	S 5	6	2.8			.036	.033	1.31	
A1037-27	10 37.1	-27 39	270.41	139.8						.87	.06	.85	
	4.75	-31.2	26.50	-36.9						.075	.100		
N3333	10 37.6	-35 47	275.15	149.9	.SA.55/	5	P048C						
	4.60	-31.3	19.63	-36.3									
N3347A	10 38.1	-36 10	275.45	150.4	.SB55*/	5	P048C			1.32	.53	1.20	
	4.60	-31.3	19.35	-36.2						.224	.129	1.24	
N3347C	10 38.5	-36 2	275.46	150.2	.SXS85.	8s	P048C			1.45	.16	1.41	
	4.60	-31.3	19.51	-36.1			2.0			.183	.129	1.44	
A1039+23	10 39.03	-23 7.6	268.01	134.2	.S..9..	9	P048N			1.21	.03	1.21	
D 85	4.83	-31.3	30.52	-36.4	I	9	2.0			.046	.045	1.23	
A1039+48	10 39.25	48 1.7	164.87	61.1						.86	.44	.76	
MK151	5.97	-31.4	57.48	-9.9						.042	.045		
N3338	10 39.48	14 0.6	230.34	91.8	.SASS..	5	W100V	S F	2	1.74	.17	1.70	*
	5.33	-31.4	57.02	-26.6	S 4	3	4.1		4 S	.029	.021	1.72	
N3347B	10 39.6	-36 40	276.00	151.0	.SB57s/	7s	S030C			1.59	.69	1.43	
	4.60	-31.3	19.07	-35.8			1.8			.183	.105	1.46	
A1039+34	10 39.85	34 42.8	190.07	72.5	.IBS9..	10	P048N			1.65	.04	1.64	
D 84	5.66	-31.4	61.52	-16.3	I	9	2.8			.039	.038	1.65	
A1040+20	10 40.40	20 40.9	218.85	85.4	.L.....	-2	P048N			1.26	.50	1.18	
MK416	5.43	-31.4	59.97	-23.4			1.6			.042	.045		
N3347	10 40.5	-36 6	275.86	150.3	.SBT3..	3	C060C		5	1.64	.22	1.59	
	4.61	-31.4	19.66	-35.7			3.4		4 S	.047	.037	1.64	
N3329	10 40.52	77 4.3	131.70	37.7	RSAR3*.	3*	W060V	D GK		1.32	.21	1.27	
	8.21	-31.5	38.08	8.3	S *		2.8		4	.035	.031	1.30	
N3344	10 40.78	25 11.1	210.05	81.2	RSAR4..	4	W060V	S F		1.84	.03	1.83	*
	5.49	-31.4	61.25	-21.1	S 5	3	4.0		3VS	.028	.021	1.85	
N3354	10 40.8	-36 6	275.92	150.2									
	4.62	-31.4	19.69	-35.6									
N3346	10 40.99	15 8.1	228.82	90.9	.SBT6..	6	W100V	SB *AF		1.45	.05	1.44	
	5.35	-31.4	57.88	-25.8	S 5	3	3.7			.031	.026	1.45	
A1041+60	10 41.28	60 37.8	147.02	51.1	.L..9..	10	P048N			1.25	.08	1.23	
D 86	6.41	-31.5	50.41	-1.2		9	2.0			.052	.050	1.24	
N3358	10 41.3	-36 7	276.02	150.3	RSX50..	0	C060C			1.58	.22	1.53	
	4.62	-31.4	19.72	-35.5			3.3		4	.048	.038	1.59	
N3351	10 41.32	11 58.1	233.96	94.1	.SBR3..	3	P200V	B FG	25	1.87	.16	1.84	1.36
	5.30	-31.4	56.37	-27.1	SX3	3	5.0	B G	5	.027	.019	1.86	.03
N3357	10 41.70	14 20.8	230.28	91.7	.L..*.	-3*	P048C			1.27	.00	1.27	
	5.33	-31.5	57.66	-26.0			2.1			.069	.067	1.30	
N3353	10 42.27	56 13.4	152.31	54.7	.S..3SP	3s	P048C			1.17	.13	1.14	*
MK 35	6.20	-31.5	53.37	-3.7	S *		1.8	I P A *		.037	.034	1.16	
N3343	10 42.3	73 37	134.31	40.6	.E..3..	-5	P048N			1.20	.15	1.16	
	7.50	-31.5	40.89	6.4			1.8			.071	.071	1.21	
N3359	10 43.35	63 29.2	143.60	48.9	.SBT5..	5	P200V	B P A	1	1.83	.20	1.78	*
	6.54	-31.6	48.59	.6	SX5	3	4.9		2VS	.033	.025	1.80	
N3348	10 43.46	73 35.2	134.46	41.0	.E..0...*	-5*	W060V	E1 K	3	1.35	.01	1.35	0.90
	7.40	-31.6	41.35	6.2	E 1		3.1	E2 K		.065	.053	1.40	.05
N3365	10 43.7	2 5	247.77	104.8	.S..6*.	6*	P048N			1.67	.71	1.50	
	5.18	-31.6	50.77	-30.3			2.2			.039	.038	1.52	
N3367	10 43.93	14 0.8	231.32	92.3	.SBT5..	5	W100V	BS *AF	5	1.37	.04	1.36	*
	5.32	-31.6	57.96	-25.6	S 5	1	3.5	S AF	5VS	.029	.023	1.38	
N3368	10 44.13	12 5.1	234.44	94.3	.SXT2..	2	P200V	S P *GK	3	1.85	.14	1.81	1.35
	5.30	-31.6	57.01	-26.4	S 3P		5.0	S P G	3 S	.029	.022	1.83	.03
N3370	10 44.39	17 32.3	225.36	88.9	.SASS..	5	W060V	S F	4	1.49	.22	1.44	
	5.37	-31.6	59.67	-24.0	S 5	5	3.1		3 S	.032	.027	1.46	
N3377A	10 44.72	14 20.1	230.97	92.1	.SXS9..	9	P200V			1.30	.01	1.30	
D 88	5.33	-31.6	58.29	-25.3			4.0			.043	.039	1.31	
N3364	10 44.83	72 41.3	134.87	41.4	.SXT4..	4	P048C			1.27	.01	1.26	
	7.30	-31.7	41.74	6.1			2.1			.048	.037	1.29	
A1045+11	10 45.0	11 22	235.76	95.1	.SA..5..	5	P048N			1.45	.39	1.37	
	5.29	-31.6	56.80	-26.5			2.1			.039	.038	1.35	
N3377	10 45.05	14 15.0	231.18	92.2	.E..5...*	-5*	P200V	E5 K	3	1.64	.21	1.59	1.15
	5.32	-31.6	58.32	-25.3	E 5		4.5	E5 K		.043	.025	1.62	.04
N3379	10 45.19	12 50.8	233.50	93.6	.E..1...*	-5*	P200V	E1 K	3	1.65	.05	1.64	1.27
	5.31	-31.6	57.63	-25.9	E 1		4.7	ED K	4	.037	.028	1.67	.02
A1045+66	10 45.22	66 37	140.24	46.4	.S..3..	3	P048N			1.35	.69	1.19	
	6.71	-31.7	40.43	2.6			1.6			.046	.045	1.22	
N3380	10 45.45	28 52.0	202.58	78.3	PSB.15.	1	P048C			1.28	.08	1.26	
	5.53	-31.6	62.80	-18.3			2.1			.037	.035	1.28	
N3381	10 45.6	34 58	189.24	72.9	.SB..P.	3s	P048N			1.38	.04	1.37	
	5.63	-31.7	62.67	-15.1			2.3			.039	.038	1.39	
N3450	10 45.63	-20 35.1	267.87	131.2	.SBR3..	3	P048C			1.43	.00	1.43	
	4.89	-31.6	33.49	-34.7			2.4			.129	.082	1.46	
N3384	10 45.64	12 53.7	233.53	93.6	.LBS*..	-3	P200V	D P K *	3	1.77	.35	1.69	0.97
	5.31	-31.6	57.75	-25.7	E 7		4.6	N K	5	.043	.029	1.72	.04
A1045+26	10 45.7	26 51	206.96	80.2	.SASSP.	5	P048N			1.18	.02	1.18	
	5.49	-31.7	62.63	-19.3			1.9			.039	.038	1.20	
N3390	10 45.73	-31 16.2	274.27	144.2	.S..3./	3	P048C			1.60	.77	1.42	
	4.73	-31.6	24.39	-35.0	S 3		2.0			.081	.058	1.46	
N3389	10 45.83	12 47.9	233.73	93.8	.SASS..	5	P200V	S A	2	1.43	.25	1.37	*
	5.30	-31.7	57.74	-25.7	S 5 K	5*	4.0	SI *A	3VS	.030	.025	1.39	
A1045+50	10 45.90	50 18.2	160.21	59.9						.93	.30	.86	
MK152	5.96	-31.7	57.28	-6.7						.075	.100	.51	
A1046+26	10 46.0	26 20	208.10	80.7						.51	.00		
	5.49	-31.7	62.62	-19.5						.075	.100		
A1046+52.	10 46.07	52 35.8	156.73	58.0						1.16	.21	1.11	
MK153	6.03	-31.7	56.01	-5.3						.075	.100		
A1046+65	10 46.28	65 47.7	140.91	47.2	.L..9..	10	P048F			1.47	.00	1.47	
D 87	6.63	-31.7	47.12	2.2			2.5			.050	.050	1.48	
I2604	10 46.64	33 2.4	193.40	74.7	.SBS9P5	9	P048C			1.15	.13	1.12	
	5.59	-31.7	63.07	-16.0			1.7			.038	.036	1.13	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₈ m' ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _L N _B N _T (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
N33188				.63												-287	
N3310	10.9 10.99	11.2 .1	9.7 13.6	.22 10.90 .21	0.32 .05	*	0.30 .05	*	.24	1.53 1 3 3	.905 .54*	1.55 2 .01	1.87 1.79		994 2 5 7 3711*	1063 69 3735	PS
A1035+44															0 3 34 749	24 759	PT
N3319	12.3 11.54 12.9 12.93	11.78 .11	15.2 11.38 .21	.20 11.38 .21	.45 .07				.35			1.59 3 .01 .91 1 .01	1.21		3 1 6 2328 1 0 10	10 2367 39	
A1037-27				.38													S
N3333				.49												-268	
N3347A				.50												-281	
N3347C				.50												-281	
A1039-23				.33								.98 1 .01			1200 1 0 15	942 -258	
A1039+48				.21											1543 0 2 43	1585 42	
N3338	12.2 11.52	11.30 .13	14.4 10.97 .51	.19 10.97 .51	0.55 .05		*		.47			1.82 1 .01	1.04		1316 1 1 28	1191 -125	PT
N3347B				.20								1.47 1 .01			634 1 0 10 1308 0 2 71	609 -25 1214 -94	
A1039+34				.19													
A1040+20				.19													
N3347	12.8 12.19 12.9 12.99	12.5 .3	14.9 13.9	.49 .34											1689 0 1 150 585	-281 1865 176 513	PT
N3329	11.9 10.95	10.50 .09	14.5 10.28 .49	.19 10.28 .49	0.55 .04	*			.50	1.005 4 0 1	1.055 1.055	1.90 3 .01	3.825 1.54		2 1 8	-72	PT
N3344		13.8 .3		.19													P
N3354	12.4 12.18		14.2	.19												-280 -120	P
A1041+60				.25								.90 1 .01			1019 1 0 10	1123 104	P
N3358	13.0 12.46 11.5	12.7 .3 10.50	14.8 12.8 14.3	.49 12.8 10.18 .19		0.79 -03	0.20 .04	0.83 .02	0.25 .02	.71 .13	1.62 5 2 1	.66* 1.195		2.36	807 0 2 18	-280 673 -134	PT
N3351	10.73	.08	14.3	.19													
N3357				.19													
N3353	13.0 13.32	13.2 .1	13.6 12.86	.23 12.86	0.50 .05	-.30 .04	*	*	.42 -.36						865 0 2 10	-123 948 83	
N3343				.32													
N3359	12.2 11.35 12.1	11.00 .09 12.3	14.5 10.57 12.3	.26 10.57 .31	0.55 .04 1.12	*			.45			1.98 1 .01	1.05		1007 2 1 8 2855	162 1124 117 3015	PT
N3348	11.98	.13	14.0	.21	.05 .06	0.49 .06	1.14 .03	0.54 .03	1.02 .42						0 1 75	160	S
N3365				.21													
N3367	12.3 12.30	12.05 .09	13.6 11.81	.19 11.81	0.57 .04	*			.50			.89 1 .01	2.53		3037* 2913 1 1 13	-175 -124	PT
N3368	10.4 10.06 12.4 12.28	10.10 .06	12.3 13.8 9.79 19	.19 13.8 9.79 .19	0.86 .02	0.27 .03	0.93 .02	0.40 .02	.78 .20	.705 2 0 1	1.335 1.335	1.46 2 .01	5.065 3.12		905 2 3 18 1320 0 1 64 572 1 0 10	773 -132 1213 -107 450 -122	PT
N3370			14.0	.19								.51 1 .01					
N3377A				.19													
N3364		13.50 .11	14.7	.31												158	T
A1045+11				.19												-135	
N3377	11.6 11.11 10.8 10.47	11.05 .05 10.20 .04	12.3 13.7 12.0 13.3	.19 10.85 .19 10.00 .27	0.84 .02 0.94 .02	0.31 .03 0.52 .03	0.88 .02 0.96 .01	0.36 .03 0.57 .02	.79 .27 .89 .48						718 0 1 40 885 0 2 27	596 -122 756 -129	PT
N3379				.27													
A1045+66				.27													
72346				.19												132	
N3380				.19												-52	
N3381				.19												-22	
N3450				.31													
N3384	11.3 10.80	10.87 .05	11.2 13.7	.19 10.60 .19	0.91 .02	0.46 .02	0.96 .02	0.53 .02	.84 .41						770 0 2 27 6293 1 1 10	-250 642 -128 6231 -62	P
A1045+26				.19													
N3390	13.2 12.99 12.6 12.59	13.4 .15 12.35 .13	14.3 11.95	.41 11.95	1.24 .06 0.55 .04	.17 .07 -.25 .05	*	*	.45 -.32						1267 0 2 32	-272 1138 -129	PS
N3389				.21											6973 0 2 39 6439 1 1 46 2423 0 1 220 337 1 0 15	7027 54 6375 -64 2489 66 465 128	
A1045+50				.19								.06 1 .01					
A1046+26		15.7 .15		.22													
A1046+52.				.27								.95 1 .01					
A1046+65				.19													
72347				.19													
I2604				.19												-31	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w. (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log D ₀ (12)	Log A _e m.e. (13)
A1046+23 MK417	10 46.80 5.44	23 13.8 -31.7	214.73 62.14	83.7 -20.8									
N3395	10 47.04 5.59	33 14.7 -31.7	192.93 63.14	74.6 -15.8	.SXT6P* S 5 T	6*	P200V 3.8	I A I A	2 4VS	1.29 .031	.20 .025	1.25 1.26	
N3396	10 47.14 5.59	33 15.3 -31.7	192.91 63.16	74.6 -15.8	.1B.9P. P T -	10	P200V 3.9	I A I A	4	1.45 .035	.37 .027	1.37 1.38	
A1047-01	10 47.7 5.14	-1 0 -31.7	252.27 49.31	108.5 -30.3	.SX.4..	4	P048N 1.7			1.12 .039	.09 .038	1.10 1.12	
N3404	10 47.81 5.01	-11 50.7 -31.7	262.16 40.98	120.9 -33.0	.SB.25/	2	P048C 1.8		3VS	1.41 .058	.57 .058	1.28 1.31	
A1047+19 D 89	10 47.82 5.39	19 54.5 -31.7	221.56 61.34	87.0 -22.2	.I..9P. P	10	P048F 1.6			1.16 .039	.29 .038	1.09 1.10	
N3400	10 48.01 5.51	28 44.1 -31.8	202.96 63.35	78.8 -17.9	.SBS15.	1	P048C 1.7			1.15 .037	.19 .034	1.11 1.13	
N3412	10 48.25 5.31	13 40.5 -31.8	232.88 58.70	93.2 -24.8	.LBS0..	-2	W100V 3.7	D P*GK D P GK	3 4	1.56 .041	.25 .029	1.50 1.53	1.00
A1048+44 MK155	10 48.40 5.80	44 50.1 -31.8	169.02 60.33	66.7 -9.4	.P.....		P048N .8			.74 .039	.24 .038	.69 .71	
N3398	10 48.48 6.10	55 39.4 -31.8	152.12 54.41	55.7 -3.3	.S..15.	15	P048C 1.4			1.12 .044	.38 .040	1.03 1.06	
I0651	10 48.5 5.13	-1 52 -31.8	253.40 48.81	109.6 -30.4	.P.....		P048N 1.4			.91 .039	.00 .038	.91 .94	
A1048+28	10 48.5 5.50	28 7 -31.8	204.36 63.40	79.4 -18.1	.S..4..	4	P048N 1.4			1.22 .050	.65 .050	1.07 1.09	
N3414	10 48.53 5.50	28 14.5 -31.8	204.08 63.42	79.3 -18.1	.L...P.	-2	P200C SBO	B *K B P *K	4	1.56 .047	.13 .042	1.53 1.56	1.05
N3413	10 48.57 5.57	33 1.9 -31.8	193.36 63.48	75.0 -15.6	.L....../	-2	W100V 3.2	D P *K S AF		1.38 .043	.70 .032	1.29 1.32	
N3423	10 48.64 5.22	6 6.3 -31.8	244.17 54.37	101.0 -27.7	.SAS6..	6	W100V 3.9		3VS	1.59 .031	.05 .024	1.58 1.60	
N3419	10 48.65 5.32	14 12.7 -31.8	232.08 59.06	92.7 -24.5	RLXR...	-1	W100V 2.8		5	1.03 .039	.07 .035	1.01 1.03	
N3418	10 48.66 5.50	28 2.7 -31.8	204.53 63.43	79.5 -18.1	.SXS15.	15	P048C 1.8			1.16 .037	.10 .034	1.14 1.16	
N3419A	10 48.68 5.32	14 17.4 -31.8	231.96 59.10	92.6 -24.5	.SBS3*/	3*	W100V 2.5			1.28 .037	.82 .034	1.09 1.11	
N3415	10 48.84 5.78	43 58.7 -31.8	170.53 60.76	65.5 -9.8	.LA..*.	-1	P048C E 4			1.38 .041	.20 .042	1.33 1.36	
N3424	10 49.00 5.57	33 9.9 -31.8	193.04 63.56	74.9 -15.5	.SBS3*5	35	W100V 3.2			1.47 .032	.51 .028	1.35 1.37	
N3408	10 49.09 6.21	58 42.2 -31.8	148.21 52.44	53.2 -1.5	.S..5*.	5*	P048C 1.6			1.02 .038	.06 .035	1.01 1.03	
N3407	10 49.1 6.34	61 39 -31.8	144.85 50.37	50.8 .1	.L...*.	-3*	P048N 1.7			1.23 .050	.29 .050	1.16 1.20	
A1049+59	10 49.3 6.26	59 57 -31.8	146.72 51.60	52.2 -1.8	.SB.55.	5*	P048C 1.6			.70 .061	.14 .058	.67 .69	
N3430	10 49.41 5.57	33 12.9 -31.8	192.91 63.64	74.9 -15.4	.SXT5..	5	W100V S 5	S AF S A	2 3 S	1.59 .029	.22 .023	1.54 1.56	1.15
N3433	10 49.44 5.27	10 24.8 -31.8	238.33 57.16	96.6 -25.9	.SAS5..	5	W100V S 3	S F S F	3 S	1.55 .037	.04 .029	1.54 1.56	.05
N3432	10 49.71 5.34	36 53.1 -31.8	184.78 63.16	71.7 -13.4	.SBS9./	9	W060V 3.3	SI *A SI *A *	2	1.79 .025	.60 .018	1.65 1.66	
N3437	10 49.89 5.43	23 12.0 -31.8	215.19 62.82	84.1 -20.2	.SXT5*.	5*	W100V S 3	SI *AF SI *AF	3 S	1.41 .034	.44 .028	1.30 1.32	
A1050+50 MK156	10 50.18 5.92	50 33.0 -31.9	159.12 57.71	60.1 -6.0	.P...5.	4	P048N 1.3			1.07 .039	.39 .031	.98 1.01	
N3403	10 50.23 7.31	73 57.4 -31.9	133.45 40.95	40.6 7.1	.SA.4*.	4	W060V S 4	SD G *	4	1.49 .035	.36 .030	1.41 1.44	
N3442 MK418	10 50.35 5.58	34 10.6 -31.9	190.71 63.74	74.1 -14.7	.S..15.	15	P048C 1.2			.86 .050	.10 .050	.83 .85	
N3444	10 50.37 5.27	10 28.6 -31.9	238.48 57.39	96.6 -25.7	.S..3*/	3*	P048C .9			1.07 .050	.86 .050	.87 .89	
A1050+07 D 90	10 50.38 5.24	7 53.0 -31.9	242.25 55.83	99.3 -26.6	.I..9..	10	P048N 2.0			1.22 .100	.05 .100	1.21 1.22	
N3449	10 50.54 4.74	-32 39.7 -31.8	275.99 193.37	145.9 -33.9	.SXR0*.	0	P048C S 0			1.42 .061	.33 .058	1.36 1.39	
N3447	10 50.74 5.34	17 2.3 -31.9	227.57 60.83	90.1 -22.9	.SXS8P.	8	P048C 2.5			1.58 .035	.21 .031	1.53 1.54	
N3440	10 50.79 6.13	57 23.0 -31.9	149.56 53.51	54.4 -2.1	.SB.35/	35	P048C 1.7			1.36 .037	.56 .033	1.23 1.25	
N3447A	10 50.85 5.34	17 2.9 -31.9	227.58 60.86	90.1 -22.8	.1B59P.	10	P048C 1.8			1.23 .039	.25 .038	1.17 1.18	
N3445	10 51.56 6.11	57 15.3 -31.9	149.60 53.67	54.6 -2.1	.SXS9*.	9	W060V S 5 KT	I A ISP *A *	3 S	1.21 .036	.03 .032	1.20 1.21	
N3456	10 51.59 4.97	-15 45.7 -31.9	266.06 38.30	125.7 -32.7	.SXR4*.	4	P048C 2.1			1.32 .052	.14 .043	1.29 1.31	
N3448	10 51.66 6.02	54 34.5 -31.9	153.06 55.45	56.8 -3.5	.I.0... S NT	0	W060V 3.4	I A * I P A *		1.73 .039	.46 .032	1.63 1.66	1.10
N3454	10 51.83 5.35	17 36.7 -31.9	226.74 61.31	89.7 -22.4	.SBS58/	58	W100V 2.9	SI *AF*		1.34 .035	.62 .030	1.19 1.21	.04
N3455	10 51.86 5.35	17 33.1 -31.9	226.86 61.29	89.7 -22.4	PSXT3..	3	W100V 3.5	SI *AF	3 S	1.44 .034	.18 .029	1.40 1.42	
A1052+49 MK157	10 52.09 5.89	49 59.6 -31.9	159.66 58.28	60.7 -6.0	.P.....		P048N 1.7			1.09 .039	.05 .038	1.08 1.11	
N3464	10 52.23 4.91	-20 47.9 -31.9	269.58 34.13	131.7 -33.2	.SXT4..	4	P048C S 3			1.45 .037	.15 .034	1.42 1.45	
N3458	10 52.98 6.10	57 23.0 -32.0	149.22 53.72	54.6 -1.8	.LX..*.	-2	W060V S *	D *K	4 S	1.22 .047	.19 .041	1.18 1.21	
N3466	10 53.64 5.26	10 1.3 -32.0	240.05 57.77	97.4 -25.1	.SBS35.	3	P048C 1.6			1.11 .037	.22 .035	1.06 1.08	
A1055+72 MK159	10 55.41 7.02	72 54.6 -32.1	133.85 42.02	41.7 6.8									
N3470	10 55.67 6.15	59 46.8 -32.1	145.99 52.28	52.8 -2	.SAR3*.	3	P048C 2.0			1.23 .034	.06 .036	1.22 1.24	
A1055+24 MK419	10 55.76 5.42	24 27.7 -32.1	213.16 64.43	83.6 -18.5						.39 .050	.00 .050	.39	
N3471	10 56.03 6.23	61 47.8 -32.1	143.74 50.82	51.1 9	.S..1..	1	P048N 1.9			1.31 .039	.28 .038	1.24 1.27	
N3478	10 56.59 5.76	46 23.4 -32.1	164.85 60.85	64.2 -7.3	.SBT4..	4	P048C S 4			1.45 .037	.31 .035	1.38 1.40	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T ⁰ (U-B) _T ⁰ (23)	Log S _R N _e N _H N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
A1046+23				.19										9800	9721	
N3395	12.4	12.4		.19	.29	-.27			.20			1.27		0 1 100	-79	P
V246	12.63	.15	13.2	12.04	.06	.07			-.34			1 .01	1.355	1625	1595	
N3396	12.8	12.6		.19	.44	-.19			.30					2 3 6	-30	P
V246	12.62	.15	13.8	12.04	.06	.07			-.29					1680*	1650	
A1047-01				.22										0 3 16	-30	
N3404				.26										4537	4351	
														1 1 12	-186	
															-224	
A1047+19				.19								.53		1254	1159	
N3400				.19								1 .01		1 0 10	-95	
N3412	11.6	11.45	11.9	.19	0.90	0.30	0.92	0.45	.83					861	737	
A1048+44	11.51	.07	13.5	11.15	.03	.03	.02	.03	.24					0 1 75	-124	
N3398		13.6	.15	11.5	.20	.69	.26		.59					1841	1869	
				13.20	.06	.07			.21					0 1 220	28	
I0651				.22											81	
A1048+28				.19											-189	
N3414	12.2	11.75	12.5	.19	1.00		1.05		.93					1449	-55	P
N3413	11.79	.08	14.1	11.49	.05		.05							0 1 100	1395	
N3423	11.9	11.62	.11	14.3	.20	.45			.39			1.29		1010	-30	T
N3419	11.55	.11		11.38	.07							1 .01	1.96	1 0 10	-157	
N3418				.19										2970	2849	
N3419A				.19										0 1 61	-121	
N3415	13.1	*		.20	*	*									-55	
N3424	12.88		14.1	.19											-121	
N3408				.24											24	
N3407				.25										9574	9670	
A1049+59				.24										0 1 32	96	
N3430	12.4	12.15	13.4	.19	0.65	0.04	0.65	0.10	.55					5040	5150	
N3433	12.05	.09	14.4	11.78	.04	.05	.04	.05	-.03					0 1 120	110	
	12.9		14.8	.19										8387	8489	
	12.28													0 1 91	102	
N3432	12.2	11.735	.19	.48					.30			1.78		636	625	P
V 11	11.91	.09	14.0	11.00	.07							1 .06	.99	1 2 13	-11	PT
N3437	12.6			.19										1119	1091	
A1050+50	12.83		13.6	.21										0 1 40	-78	
N3403	12.9			.32										1263*	1320	
N3442	12.74		14.1	.19										0 2 52	57	
N3444				.19										1195	1359	
A1050+07				.20										0 1 66	164	
N3449	13.2			.42										1738	1714	
N3447	13.06		14.2	.19										0 2 71	-24	
V252				.23											-137	
N3440				.19											-149	
N3447A	12.9	12.8		.23	.38	-.32			.31					1064	-273	
V 14	12.83	.15	13.6	12.54	.06	.07			-.37					1 2 11	957	
N3456				.27											-107	
N3448	12.6	12.15	13.1	.22	0.42	-.20	0.45	-.16	.28			1.48		1391	1468	P
N3454	12.03	.08	14.5	11.59	.03	.03	.03	.03	-.28			2 .02	1.25	2 2 10	77	
				.19										1138	1034	
														0 1 95	-104	
N3455	13.1			.19										1092	987	
A1052+49	12.81		14.4	.21										0 1 95	-105	
N3464	13.2			.30										1387	1441	
N3458	12.82		14.5	.23										0 2 52	54	
N3466	13.0		13.6	.19											-248	
	13.15														90	
															-138	
A1055+72		*		.31	*	*								8041	8201	
N3470				.24										0 1 220	160	
A1055+24				.19										6639	6741	
N3471		*		.25	*	*								0 1 43	102	
N3478	13.2			.20										6765	6695	
	12.98		14.3											0 1 100	-70	
														2076	2188	
														0 3 34	112	
															38	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log(D) Log D ₀ (13)	Log A _e m.e. (14)
N3485	10 57.40 5.31	15 6.6 -32.1	232.65 61.34	92.7 -22.2	.SBR3* S4	3* 3*	W060V 3.1	SB *AF D GK	4 S 3	1.40 1.57	.05 .029	1.39 1.41	
N3489	10 57.68 5.29	14 10.2 -32.1	234.39 60.91	93.7 -22.5	.LXT* E 6	-1 5	W100V 3.7	SO K S FG	4VS 4	1.51 1.84	.026 .11	1.53 1.81	0.80 1.45
N3486	10 57.70 5.47	29 14.6 -32.1	202.09 65.49	79.4 -15.8	.SAR5* S 5	5 3	W100V 4.4	S G S G	03	1.30 1.30	.028 .15	1.83 1.26	.04
N3488	10 58.38 6.04	57 56.7 -32.2	147.69 53.84	54.5 -9	.SB55* S 3	5 7*	P048C W100V			1.30 1.66	.037 .054	1.28 1.53	
N3495	10 58.68 5.19	3 53.8 -32.2	249.89 54.72	104.3 -26.1	.S...7* S 3	7* 3*	W100V 3.6	S *AF 2VS		.032	.026	1.54	
A1059+45	10 59.12 5.71	45 29.8 -32.2	165.99 61.69	65.2 -7.4	.P..... S 5 K		P048N 3.9			.91 .027	.18 .020	.86 1.67	
MK161	11 0.21 5.97	56 29.5 -32.2	149.14 55.05	55.9 -1.5	.I.O.S. RSX52*	05 2	P048C P200V			1.00 1.43	.05 .09	.99 1.41	
N3499	11 0.48 5.44	28 14.5 -32.2	204.61 66.04	80.6 -15.8	S 3 T * S 5 K	5*	W100V 3.0	R P*FG* BDP*G *	4S 5	1.03 1.13	.036 .03	1.02 1.43	0.90 1.41
N3504	11 0.60 5.26	11 20.8 -32.2	239.95 59.93	96.8 -23.0	.S...5* S 5 K	5*	W100V 3.0	S F 3 S		1.03 1.55	.032 .07	1.12 1.54	.04
N3506	11 0.8 5.33	18 24 -32.3	227.14 63.58	89.9 -20.1	.SB53* S 5	3	P048N 2.6			.039	.038	1.56	
N3511	11 0.95 4.92	-22 49.0 -32.3	272.91 33.41	134.2 -31.4	.SAS5* S 5 K	5	W100V 3.9	S A I *A	2ES 1	1.73 1.58	.38 .01	1.64 1.43	
N3510	11 1.02 5.45	29 9.3 -32.3	202.38 66.21	79.8 -15.2	.SB59/ S T	9	W100V 3.4	S *FG* S		.031	.024	1.44	1.00
A1101+41.	11 1.10 5.62	41 7.2 -32.3	174.19 63.99	69.2 -9.3	.RING* S 5 K	10R	P200V W100V			.81 1.44	.10 .08	1.44 1.42	.04
N3513	11 1.32 4.92	-22 58.5 -32.3	273.09 33.31	134.4 -31.3	.SBT5* S5 K	5	W100V 3.6	B AF S F	5 S	1.09 1.23	.075 .04	.80 1.23	
N3512	11 1.34 5.44	28 18.3 -32.3	204.49 66.23	80.6 -15.6	.SXT5* S 5	5	W100V 3.2	S P FG*	4 S	.031	.026	1.25	
N3509	11 1.81 5.20	5 6.0 -32.3	249.34 56.12	103.3 -25.0	.SAS4P. S 5	4	P200C 3.5			1.37 .039	.31 .038	1.30 1.32	
N3515	11 1.91 5.44	28 29.8 -32.3	204.04 66.37	80.5 -15.4	.SA.5* S 5	5	P048C 1.6			1.04 .038	.09 .037	1.02 1.04	
A1102+29	11 2.26 5.45	29 24.6 -32.3	201.76 66.49	79.7 -14.9						.51 .042	.07 .045	.49	
MK 36	11 2.30 5.67	45 1.0 -32.3	166.26 62.41	65.9 -7.2						.79 .075	.33 .100	.72	
A1102+45	11 2.64 5.94	56 47.7 -32.3	148.35 55.07	55.8 -1.0	.SA.3* S 5	3	P048C 1.7			1.09 .038	.06 .036	1.07 1.09	
N3517	11 3.26 5.15	0 14.2 -32.3	255.54 52.83	108.5 -26.2	.SXT4* S 4	4	W100V 4.5	S F 4VS	4	1.98 .028	.28 .021	1.91 1.93	1.40 .03
A1103+20	11 3.27 5.34	20 5.7 -32.3	224.10 64.79	88.5 -18.9	.S...9* S 4	9	P048N 2.2			1.29 .052	.00 .050	1.29 1.30	
N3516	11 3.38 5.67	72 50.4 -32.4	133.24 42.40	42.1 7.3	RIB50* E	-2	W060V 3.0	RD *K	35	1.35 .046	.039 .039	1.38 1.38	0.5 S .1
A1103+48	11 3.58 5.74	48 54.3 -32.4	159.25 60.43	62.6 -5.0						.55 .050	.43 .050	.45	
MK163	11 3.8 5.96	57 58 -32.4	146.77 54.32	54.9 -3	.SB55P. S 5	5	P048C 2.0			1.12 .061	.16 .058	1.08 1.10	
A1103+57	11 4.67 5.32	18 42.0 -32.4	227.40 64.54	90.0 -19.1	.LX.-P. S 4	-3	P200C 1.9			.47 .042	.11 .045	.45 .48	
A1104+18B	11 4.69 5.32	18 42.1 -32.4	227.40 64.54	90.0 -19.1	.LXR-P. S 4	-1	P200C 3.1			1.09 .075	.24 .100	1.03 1.05	
N3533	11 4.8 4.77	-36 54 -32.4	280.88 21.19	150.7 -30.7	.S...3* S 4	3*	P048C 1.6			1.42 .141	.53 .088	1.30 1.35	
N3557B	11 7.17 4.78	-37 4.8 -32.5	281.42 21.23	150.9 -30.3	.E.S.* S 4	-5*	R060V 2.2			1.27 .141	.23 .069	1.22 1.29	
A1107+24A	11 7.18 5.37	24 32.0 -32.5	216.38 66.98	84.7 -16.1	.S...3SP S 4	3*	P200C 2.9			1.00 .039	.19 .038	.96 .98	
A1107+24B	11 7.23 5.37	24 31.7 -32.5	214.40 66.99	84.8 -16.1	.S...3SP/ S 4	3*	P200C 2.8			1.22 .039	.74 .038	1.05 1.07	
N3547	11 7.32 5.24	10 59.6 -32.5	242.54 61.03	97.8 -21.6	.S...3* S 4	3*	W100V 2.2	SI *AF I P	2 S	1.34 .036	.28 .032	1.27 1.29	
I2627	11 7.43 4.94	-23 27.3 -32.5	274.85 33.55	135.1 -29.9	.SAS4* S 4	4*	W060V 3.2			1.43 .049	.02 .037	1.42 1.45	
N3557	11 7.60 4.78	-37 15.9 -32.5	281.59 21.09	151.1 -30.2	.E.3... S 4	-5	W100V 3.8	S F 3	3 S	1.60 .224	.17 .105	1.56 1.63	1.15 .04
A1107+28A	11 7.9 5.41	28 35 -32.5	204.01 67.69	81.1 -14.2	.E.O.S. S 5 K	-5*	P048N 1.7			1.07 .042	.00 .045	1.07 1.10	
A1107+28B	11 7.9 5.41	28 36 -32.5	203.97 67.69	81.1 -14.1									
N3550	11 7.9 5.41	29 2 -32.5	202.83 67.71	80.7 -13.9	.P..... S 3		P048N 1.9			1.16 .042	.03 .045	1.15 1.18	
N3549	11 8.05 5.79	53 39.6 -32.5	151.35 57.84	58.9 -2.0	.SAS5* S 3	5*	W060V 3.0	S AF S AF		1.51 .032	.40 .027	1.42 1.44	
N3559	11 8.1 8.25	12 17 -32.5	240.63 61.97	96.6 -20.9	.S...P. S 4	4	P048N 1.8			1.19 .039	.17 .038	1.15 1.17	
N3564	11 8.22 4.79	-37 16.7 -32.5	281.71 21.13	151.1 -30.0	.L..../ S 4	-2	B060V 2.3			1.32 .129	.67 .065	1.16 1.22	
N3558	11 8.23 5.41	28 48.9 -32.5	203.41 67.71	80.9 -14.0						1.12 .075	.05 .100	1.11 1.11	
MK422	11 8.43 4.79	-37 10.7 -32.5	281.71 21.24	151.0 -30.0	.SB55* S 4	5*	B060V 2.6			1.38 .085	.51 .053	1.26 1.30	
N3561B	11 8.52 5.41	28 58.1 -32.5	203.01 67.84	80.8 -13.9	.L...0P S 4	-2	P200C 3.0			.99 .042	.05 .045	.98 1.01	
N3561A	11 8.52 5.41	28 59.2 -32.5	202.97 67.84	80.8 -13.8	.SAR1P. S 5 K	1	P200C 3.1			1.03 .039	.06 .038	1.02 1.04	
N3556	11 8.61 5.83	55 56.7 -32.5	148.32 56.25	56.9 -8	.SB56/ S 5 K	6	W100V 4.1	SI *A IS *A	2	1.92 .029	.52 .021	1.80 1.82	1.40 .05
N3563	11 8.72 5.39	27 14.1 -32.5	207.60 67.76	82.4 -14.6	.LB...* S 4	-2	P048N 1.7			1.14 .042	.13 .045	1.11 1.14	
A1108-09	11 8.8 5.07	-9 42 -32.5	266.34 45.67	119.7 -27.5	.SXT4* S 0	4	P048N 2.1			1.28 .039	.06 .038	1.27 1.29	
N3571	11 9.02 5.00	-18 1.1 -32.5	272.10 38.52	129.0 -28.9	.SBT1* S 0	1	P048C 2.2			1.52 .054	.39 .046	1.43 1.46	
N3570	11 9.1 5.39	27 51.4 -32.5	206.01 67.97	81.9 -14.2	.L..... S 4	-2	P048N 1.8			1.10 .071	.10 .071	1.10 1.13	
N3574	11 9.5 5.39	27 53 -32.5	205.93 68.00	81.9 -14.2						.68 .042	.09 .045	.65	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _c (15)	B _T m.e. (16)	m _H m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _N N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	V ₀ ΔV (29)		
N3485	12.8 12.57		14.3	.19													
N3489	11.3 11.29	11.15 .08	10.6 13.3	.19 10.81	0.82 .03	0.40 .03	0.83 .02	0.36 .03	.74 .34						695 0 2 27	-114 577	P
N3486	11.4 10.71	10.85 .08	13.6 14.6	.19 10.57	0.52 .03		0.58 .03	.45				1.62 1 .01	1.94		720* 1 1 17	-118 674 -46	PT
N3488				.23													
N3495	12.7 12.42		14.2	.20											94 999 0 1 64	837 -162	
A1059+45		*		.20	*	*						.45 1 .01			5974 1 2 25	6008 34	
N3499				.23													
N3504	11.7 11.82	11.8 .1	11.8 13.6	.19 11.52	0.70 .1	0.15 .1	0.60 .03	0.00 .03	.63 .10	1.60 5 3 1	.245 1.605		1.08		1529 0 2 29	88 1479 -50	PT
N3506	13.2 13.44		13.9	.19													
N3507				.18												-130 -97	
N3511	11.9 11.56	*	14.1	.31	*	*									1226 0 1 31	976 -250	PT
N3510	12.8 12.64	13.3 .13	13.8 14.5	.19 12.56	0.38 .04	-.23 .05	0.40 .02	-.25 .03	.20 -.36			1.49 1 .05	.18		710 1 1 17	664 -86	P
A1101+41. V 32		15.05 .08	13.7	.20 14.74	0.60 .04	-.22 .03	*	*	.46 -.32						10350 0 2 27	10363 13	P
N3513	12.0 11.99		13.8	.31													
N3512	12.8 12.93	13.0 .2	13.9	.19 12.77	0.65 .05		*		.59						1402 0 1 69	-250 1352 -50	P
N3509 V 75				.20											7646 0 1 72	7490 -156	P
N3515				.19													
A1102+29		*		.19	*	*	*	*								-48 592	
A1102+45				.20											636 0 3 42	-44 6414	
N3517				.23											6446 0 2 52	32	
N3521	10.3 9.84	9.70 .09	12.2 13.7	.21 9.26	0.84 .03	*	0.85 .03	0.31 .04	.74	1.82 4 4 4	.81* 1.23	2.20 1 .02	2.79 1.78		815 1 3 13	640 -175	PT
A1103+20				.18											1331 1 0 7	1243 -88	
N3516	12.2 12.22	12.45 .04	10.4 13.9	.31 12.06	0.82 .01	0.05 .05	0.82 .01	-.1 .1	.72 -.01			.50 1 .01	3.25		2540 1 3 23	2701 161	
A1103+48				.21											7445 0 1 220	7497 52	
A1103+57				.23											9790 0 1 138	9885 95	
A1104+188 V239				.18											7982 0 1 57	7888 -94	P
A1104+18A V239				.18											8211 0 1 55	8117 -94	P
N3533				.47													
N35578		13.2 .1	14.0	.47 12.69	0.99 .04	0.51 .06	*	*	.86 .42						2845 0 1 53	-274 2571	T
A1107+24A V229				.18											6344 0 1 95	6278 -66	P
A1107+24B V229				.18											6026 0 1 95	5960 -66	P
N3547	12.9 13.02	13.2 .15	14.0	.19 .31	.43 .06	-.22 .07											
I2627	12.8 12.48	12.6 .15	14.5	.31 12.6	.64 .06	-.03 .07										-128	
N3557	12.1 11.52	11.40 .07	12.6 14.0	.47 10.88	1.00 .03	0.57 .03	1.05 .02	0.60 .02	.86 .48	1.885 2 0 4	.845 .845		1.025		3111 0 1 24	-249 2837	T
A1107+28A				.19											10393 0 1 150	-274 10347	
A1107+28B				.19											9583 0 1 150	9537 -46	
N3550				.19											10498 0 2 62	10454 -44	
N3549	12.8 12.67		14.1	.22												76	
N3559				.19													
N3564		13.25 .08	13.0	.47 12.47	1.04 .03	0.61 .04	*	*	.85 .45						2771 0 1 33	-122 2497	T
N3558				.19													
N3568				.47											8936 0 1 220	8891 -45	
N3561B ZCG = V237				.19											2636 0 1 44	2163 -273	T
N3561A ZCG = V237				.19											8804 0 2 10	8760 -44	P
N3556	11.0 10.68	10.65 .07	13.1 13.8	.23 10.00	0.61 .03	-.01 .05	0.68 .03	0.04 .05	.46 -.12	1.30* 1 1 1	1.765 .455	1.91 3 .03	3.355 1.74		8556 0 2 34	8512 -44	PS
N3563				.19											685 4 3 6	772 87	PST
A1108-09				.24						1.04* 1 1 1	.48* .48*				9930 0 1 150	9878 -52	
N3571	13.1 12.81		14.3	.28											7776 1 1 9	7567 -209	
N3570				.19													
N3574				.19												-234 -49 -49	S S

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log A _g m.e. (14)
A1109+51 MK164	11 9.57 5.73	51 54.4 -32.5	153.46 59.22	60.5 -2.7	.S...S.		P048N .4			.61 .050	.42 .050	.51 .53	
A1110+53 D 92	11 10.53 5.76	53 52.0 -32.6	150.58 57.95	58.9 -1.6	.SX.9*.	9	P048N 2.1			1.28 .046	.05 .045	1.27 1.28	
A1110+65	11 10.8 6.11	65 27 -32.6	138.25 48.95	48.8 4.2	.S...6*.	6*	P048N 1.1			1.16 .050	.80 .050	.98 1.00	
N3585	11 10.83 4.93	-26 28.8 -32.6	277.25 31.18	138.7 -29.4	.E.7... E 5	-5	W060V 3.0	F6 K		1.46 .088	.25 .044	1.40 1.45	1.00 .05
A1110+22 D 93	11 10.83 5.34	22 26.1 -32.6	220.15 67.24	87.1 -16.3	.E.0.P. E	-5	P200V 5.0			2.16 .051	.05 .045	2.14 2.17	
N3577	11 10.93 5.65	48 32.7 -32.6	158.29 61.60	63.6 -4.1	.SBR1..	1	W060V 2.8	R G		1.23 .037	.01 .034	1.23 1.25	
A1111+57	11 11.2 5.83	57 4 -32.6	146.51 55.65	56.1 .1	.SBR4*.	4*	PG48C 1.5		4VS	.86 .061	.13 .058	.83 .85	
N3583	11 11.38 5.65	48 35.5 -32.6	158.12 61.63	63.5 -4.0	.SBS3..	3	W060V 3.1	S P FG		1.45 .034	.15 .030	1.41 1.43	
N3592	11 11.8 5.29	17 32 -32.6	231.66 65.53	91.9 -18.1	.S...4S/ 1.7	4S	P048C 1.7	S P FG*	4VS	1.31 .039	.52 .038	1.18 1.20	
A1111+56	11 11.8 5.81	56 51 -32.6	146.65 55.87	56.4 .1	.SBR3S.	3*	PG48C 1.4			.84 .061	.14 .058	.81 .83	
N3593	11 12.00 5.25	13 5.4 -32.6	240.44 63.21	96.2 -19.8	.SAS0*.	0*	W060V 3.5	S P G *	3	1.76 .028	.37 .022	1.67 1.69	
N3589	11 12.2 5.92	60 58 -32.6	142.17 52.69	52.8 2.1	.S...8*.	8*	P048N 1.8	D GK	3	1.22 .039	.24 .038	1.17 1.19	
N3596	11 12.48 5.27	15 3.6 -32.6	236.90 64.42	94.3 -18.9	.SXTS..	5	W060V 3.6	S F	4 S	1.62 .035	.01 .030	1.61 1.63	
A1112+28	11 12.6 4.92	-28 7 -32.6	278.47 29.86	140.6 -29.1	S 5 K	3		S F		1.42 .075	.33 .100	1.35 1.35	
N3595	11 12.6 5.62	47 43 -32.6	159.29 62.34	64.4 -4.3						1.22 .050	.32 .050	1.14 1.14	
N3599	11 12.81 5.29	18 23.1 -32.6	230.08 66.14	91.2 -17.5	.LA...*	-2	W100V 3.7			1.45 .100	.00 .100	1.45 1.47	0.85 .05
N3600	11 13.0 5.53	41 52 -32.6	170.31 65.66	69.6 -7.0	.S...1S.	1S	P048N 2.2			1.63 .039	.61 .038	1.49 1.51	
A1113+33	11 13.5 4.87	-33 41 -32.6	281.22 24.85	147.0 -29.1	.SRT3S.	3S	P048C						
A1113+29A	11 13.50 5.39	29 39.8 -32.7	201.17 68.94	80.6 -12.6	.E.3...*	-5*	P048C						
A1113+29B MK 37	11 13.86 5.38	29 3.0 -32.7	202.88 69.01	81.2 -12.8									
N3605	11 14.14 5.29	18 17.6 -32.7	230.64 66.38	91.4 -17.3	.E.4...*	-5	W060V E 3		3	1.23 .040	.23 .037	1.17 1.20	
N3607	11 14.28 5.29	18 19.7 -32.7	230.60 66.42	91.4 -17.2	.LAS0*.	-2	W060V E 1	DE *GK*	3	1.57 .053	.06 .036	1.56 1.58	1.08 .04
N3608	11 14.35 5.29	18 25.6 -32.7	230.40 66.48	91.3 -17.2	.E.2...*	-5	W060V E 3	E K	4 S	1.48 .057	.09 .040	1.46 1.49	0.95 .05
N3611	11 14.92 5.19	4 49.7 -32.7	254.01 58.20	104.8 -22.0	.SAS1P.	1	W100V S 0	I P GK*	4 S	1.38 .039	.07 .032	1.36 1.38	
A1115-01	11 15.4 5.14	-1 49 -32.7	261.61 53.11	111.7 -23.9	.SXS5..	5	P048N 1.9	DS GK		1.20 .039	.04 .038	1.20 1.22	
N3614A	11 15.41 5.57	45 59.3 -32.7	161.65 63.78	66.2 -4.7	.SBS9..	9	W060V 2.3			.97 .038	.05 .036	.96 .97	
N3610	11 15.51 5.81	59 3.6 -32.7	143.55 54.46	54.7 1.6	.E.5...*	-5*	W060V E 2P	ES K	3	1.50 .056	.10 .039	1.47 1.51	
N3614	11 15.57 5.56	46 1.2 -32.7	161.56 63.78	66.2 -4.7	.SARS..	5	W060V S 5	ES K S AF	4VS	1.66 .034	.20 .029	1.61 1.63	
A1115+28	11 15.6 5.37	28 33 -32.7	204.32 69.38	81.9 -12.7	.LA...*	-1	P048N 2.0	S F	3 S	1.22 .042	.00 .045	1.22 1.24	
A1115+63 MK165	11 15.62 5.94	63 33.1 -32.7	139.23 50.81	50.7 3.7									
N3613	11 15.70 5.76	58 16.3 -32.7	144.35 55.10	55.4 1.2	.E.6...*	-5	W100V E 5		3	1.56 .053	.26 .038	1.49 1.53	
N3621	11 15.84 4.89	-32 32.4 -32.7	281.22 26.10	145.7 -28.6	.SAS7..	7	W100V S 5	E6 K S1 *A	03 S 3VS	2.00 .033	.19 .025	1.95 1.98	
N3623	11 16.31 5.25	13 21.9 -32.7	241.34 64.22	96.4 -18.7	.SXT1..	1	W100V S 3 N	S G S GK	5 S 4 S	2.00 .024	.48 .017	1.89 1.91	1.38 .03
A1116+62 MK166	11 16.47 5.90	62 45.4 -32.7	139.81 51.53	51.5 3.4									
N3619	11 16.47 5.77	58 2.0 -32.7	144.47 55.35	55.6 1.2	RLAS... S N **	-1	W060V 3.3	DSP GK*	3 4VS	1.49 .047	.08 .042	1.47 1.50	
A1116+51	11 16.7 5.64	51 46 -32.7	152.13 60.11	61.2 -1.8									
A1116+02	11 16.87 5.13	-2 47.8 -32.7	263.04 52.52	112.8 -23.8									
N3626	11 17.44 5.28	18 37.8 -32.8	230.78 67.23	91.4 -16.4	RLAT... S 2 N	-1 3*	W100V P048C	D GK DS K	4 5 S	1.49 .036	.15 .028	1.46 1.48	0.90 .05
A1117+02	11 17.6 5.13	-2 46 -32.8	263.26 52.65	112.8 -23.6	.SASS..	5	W100V 1.9			1.27 .061	.18 .058	1.23 1.25	
N3627	11 17.64 5.24	13 15.8 -32.8	241.97 64.42	96.6 -18.4	.SXS3..	3	W100V S 4 NK	S P FG S G	3 4 S	1.94 .026	.30 .018	1.87 1.89	1.40 .03
N3625	11 17.64 5.76	58 3.4 -32.8	144.23 55.43	55.7 1.3	.SXS3*.	3*	W060V 2.6	SR *F	3 S	1.34 .034	.44 .030	1.23 1.25	
N3628	11 17.66 5.25	13 52.1 -32.8	240.85 64.78	96.0 -18.2	.S...3P/ S 3 NT	3	W100V 4.5	S *G * S *G *	1	2.17 .025	.61 .017	2.03 2.05	
A1117+02 D 94	11 17.68 5.17	2 47.9 -32.8	257.47 57.11	107.1 -22.0	.IB.9... I	10 9	P048N 2.1			1.38 .039	.23 .038	1.33 1.34	
N3630	11 17.70 5.17	3 14.3 -32.8	256.96 57.46	106.6 -21.8	.L...// E 7	-2	W060V 2.7		4	1.36 .038	.41 .032	1.27 1.30	
N3633	11 17.86 5.18	3 51.6 -32.8	256.26 57.96	106.0 -21.6	.S...2*.	2*	P048C 1.4	D K		1.15 .037	.43 .034	1.05 1.07	
N3629	11 17.87 5.35	27 14.2 -32.8	208.18 69.79	83.3 -12.8	.SAS6*.	6	W100V 3.4	S AF		1.35 .034	.12 .029	1.32 1.33	
N3636	11 17.89 5.08	-10 0.5 -32.8	269.33 46.56	120.6 -25.4	.E.0...*	-5	W100V 2.9		3VS	1.06 .158	.00 .075	1.06 1.10	
N3637	11 18.13 5.08	-9 59.1 -32.8	269.39 46.61	120.6 -25.3	RLBR0..	-2	W100V 3.2	R K	4	1.23 .100	.03 .051	1.22 1.25	
N3631	11 18.22 5.65	53 26.7 -32.8	149.54 59.94	59.8 -8	.SASS..	5	W060V 3.6	S F S FG	2 3 S	1.66 .033	.05 .024	1.65 1.67	
N3640	11 18.54 5.17	3 30.6 -32.8	256.93 57.80	106.4 -21.6	.E.3...*	-5	W060V 3.5	F4 K ED *K	3 03 S	1.61 .057	.08 .040	1.59 1.62	1.10 .04

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m_H m_C (15)	B_T m.e. (16)	m_e m_{28} (17)	A_B B_T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _N N _N N ₊ (24)	α_+ α_+ (25)	Log S _N N N A ₂₁ (26)	RI HI (27)	V N _N N ₀ m.e. (28)	V ₀ ΔV (29)		
A1109+51				.22										3007	3075		PT
A1110+53				.22										0 1 220	68		
A1110+65				.26								.74		929	1007		
N3585	11.5	11.0	11.5	.34	0.96	0.50	1.00	0.55	.87					1491	131		
A1110+22	11.46	.1	12.7	10.64	.03	.06	.03	.03	.43					0 1 75	1237	-254	
		12.38	.11	.18	.90	.07						1.01			-74		
N3577				.21													
A1111+57				.23										9985	10078	52	
N3583	12.2			.21						1 0 0				0 1 20	93		
N3592	12.18		13.9	.18										2160	2213		
A1111+56				.23										0 1 50	53		P
N3593	12.4	11.7		.19	.75				.64	1.40*	.715		1.865	10339	-97		
N3589	11.78	.15	14.4	11.24	.06					2 1 1	.435			0 1 31	10431	92	
N3596	12.2			.19										660	543		
A1112+28	11.64		14.6	.35								1.12		1138	111		
N3595				.21								1.01		1 1 13	1030	-108	
															-257		
N3599	12.75	12.5	.18	.086	.04	.04	.02	.30	.02						49		
N3600	.09	14.9	.20	.04	.04	.02									-93		
A1113+33				.41											20		S
A1113+29A	15.15		.19	1.09		*								3005	2738		
A1113+29B	.08		.19	.04										0 1 75	-267		
														8674	8636		
N3605	13.1	*	.18	*	*	*	*							0 1 120	-38		
N3607	13.06		.18	*	*	*	*							7007	6966		
N3608	11.4	10.95	13.6	.18	0.94	0.47	0.96	0.53	.88					0 2 39	-41		
N3611	11.16	.08	13.5	10.73	.02	.03	.02	.02	.43					0 1 65	601		
N3611	12.5	11.90	12.1	.18	0.92	0.43	0.95	0.48	.87					933	841		
A1115-01	12.02	.06	14.1	11.70	.02	.06	.02	.03	.49					0 2 35	-92		
N3614A	12.45	12.8	.20	.56	.06									1210	1118		PT
N3610	11.7	11.60	.24	0.85		*			.78					0 1 50	1765	41	
N3614	11.47	.09	13.8	11.33	.05									1765	1868		
A1115+28	12.21		.19											0 1 105	-43		
A1115+63	*		.26	*	*									9835	9792		
N3613	12.0	11.6	.23											3244	3367		
N3621	11.58	.15	13.7	11.34		*	*	*						0 1 55	123		
N3623	10.6	.08	.39	*	*	*	*			1.62	.145	2.63		2054	2154		
A1116+62	10.03		14.4	.39						1 3 3	1.36	1.01		0 1 75	100		
N3619	10.5	10.17	12.6	.19	0.90	0.41	0.96	0.52	.76					719*	455		PST
N3625	10.06	.06	13.8	9.59	.02	.04	.02	.02	.28					1 1 10	-264		
A1116+51	12.8	12.6	.23											780	666		
A1116+02	12.30	.15	14.7	12.30										0 3 21	-114		
N3626	11.8	11.7	.18	0.83		0.85		.75						3170	3290		
A1117-02	11.70	.1	13.6	11.41	.05									0 1 45	120		
N3627	9.9	9.70	12.2	.19	0.70	0.22	0.80	0.28	.60	1.70	.48	1.47	3.09	1649	1748		
V308	9.67	.06	13.5	9.26	.03	.05	.02	.02	.14	5 3 5	.88	1.02	3.61	0 1 75	99		
N3628	11.3	10.15	.19	0.80	*	*	*	.64		1.73	.84	2.03	2.80	1311	1380		PT
V308	10.32	.13	14.3	9.47	.05					4 4 5	.84	2.06	1.89	0 1 11	69		
A1117+02	12.8		.20											7275	7094		
N3630	12.87		13.5	.20										0 1 30	-181		
N3633	12.8		.20											1452	1363		
N3629	12.9		.18											0 1 100	-89		
N3636	12.80		.24	*	*									7692	7512		
N3637	12.8	*	.24	*	*									0 1 25	-180		
N3631	11.8	11.03	13.8	.22	.60			.53						697	583		
N3640	11.31	.11	14.1	0.76	.07									1 3 22	-114		PST
	11.6	11.25	12.2	.20	0.94	0.56	0.96	0.56	.88					839	728		
	11.12	.07	14.1	11.03	.03	.06	.02	.06	.52					1 1 14	-111		
														1610	1451		
														1 0 15	-159		
														1537	1380		
														0 1 150	-157		
															-154		
														1505	1457		
														1 0 10	-48		
															-206		PST

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diometers			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log A _e m.e. (13)
N3641	11 18.58	3 28.1	257.00	106.5	CE.1...	-6	P048C			1.05	.00	1.05	
I2738	5.17	-32.8	57.77	-21.6			1.7			.050	.051	1.08	
	11 18.6	34 38	186.90	76.6						.079	.00	.79	
	5.41	-32.8	69.38	-9.4						.075	.100		
N3643	11 18.84	3 17.2	257.31	106.7	.LB.+. .	-1	P048C			1.05	.39	.96	
	5.17	-32.8	57.68	-21.6			1.3			.075	.100	.99	
A1119+69	11 19.0	69 55	133.82	45.2	.S.+. .	6	P048N			1.41	.81	1.22	
	5.29	-32.8	68.48	-15.2			1.6			.039	.038	1.24	
N3646.	11 19.09	20 26.7	226.86	89.8	.RING..	4P	P200V	S AF	4	1.59	.18	1.55	1.20
	5.29	-32.8	68.35	-15.3	S S	1	4.4	S P F	3 S	.030	.022	1.57	.04
N3642	11 19.42	59 21.0	142.56	54.7	.SAR4+. .	4	W060V	S FG*	34	1.76	.07	1.74	*
	5.76	-32.8	54.53	2.1	S S N -	1	3.8	S GK	4VS	.034	.026	1.76	
N3649	11 19.61	20 29.0	226.89	89.8	.SBS1..	1	W100V			1.20	.31	1.13	
	5.29	-32.8	68.48	-15.2			2.9		4 S	.035	.031	1.15	
N3652	11 19.9	38 2	177.68	73.6	.SB.6*P	6*	P048N			1.38	.45	1.28	
	5.43	-32.8	68.54	-7.6			1.9			.039	.038	1.29	
N3650	11 19.96	20 58.7	225.72	89.4	.SA.3./	3	L036V			1.27	.67	1.11	
	5.29	-32.8	68.74	-14.9			1.8			.037	.034	1.13	
N3655	11 20.29	16 51.7	235.60	93.3	.SASS+. .	5	W060V	S AF		1.21	.11	1.18	*
	5.26	-32.8	66.97	-16.5	S *		2.6	SIP*	3 S	.045	.039	1.20	
N3656	11 20.82	54 7.1	148.12	59.4	PI.0.*P	0*	P200C			1.24	.01	1.24	
	5.63	-32.8	58.78	-1			3.6			.048	.042	1.27	
N3660	11 21.1	-8 24	269.16	119.0	.SBR4..	4	P048N			1.44	.07	1.42	
	5.10	-32.8	48.35	-24.2			2.4			.039	.038	1.44	
N3657	11 21.10	53 11.8	149.23	60.2	.SXT5P.	5	P048C			1.25	.01	1.25	
	5.61	-32.8	59.51	-4.5			2.1			.044	.041	1.27	
N3659	11 21.13	18 5.9	233.09	92.2	.SBS9S.	9S	W060V	I *A *		1.32	.25	1.27	
	5.27	-32.8	67.75	-15.8	S *		2.8	I P		.034	.029	1.28	
N3662	11 21.22	-0 49.8	262.65	111.1	.SXR3P*	3	P048C			1.21	.22	1.16	
	5.15	-32.8	54.76	-22.2			1.8			.036	.035	1.18	
N3658	11 21.27	38 50.2	175.39	73.0	.LAR0*.	-2	P048C			1.32	.05	1.31	
	5.43	-32.9	68.45	-7.0			2.2			.065	.053	1.34	
N3666	11 21.84	11 37.1	246.41	98.6	.SAT5*.	5	W100V	SI *AF		1.62	.48	1.51	
	5.22	-32.9	64.18	-18.1	S 3	5	3.6	B *F *		.030	.022	1.53	
N3664A	11 21.85	3 29.8	258.15	106.7	.SB.9P*	9	W100V			1.03	.00	1.03	
	5.17	-32.9	58.31	-20.8			2.9			.050	.050	1.04	
N3664	11 21.85	3 36.3	258.03	106.6	.SBS9P.	9	W100V	I A		1.31	.02	1.30	
0 95	5.17	-32.9	58.40	-20.8	SX	8*	3.4	I P*A*		.036	.033	1.31	
N3665	11 22.02	39 2.2	174.72	72.9	.LAS0..	-2	W100V	DEP*K		1.51	.10	1.49	*
	5.43	-32.9	68.49	-6.8	E 2		3.7		04	.055	.038	1.52	
A1122-13	11 22.3	-13 17	272.91	124.4	.SXS3..	3	P048C			1.29	.14	1.26	
	5.07	-32.9	44.21	-25.0			2.0			.061	.058	1.28	
A1122+64	11 22.4	64 1	137.83	50.7	.SAT5..	5	P048N			1.42	.03	1.41	
	5.83	-32.9	50.82	4.6			2.4			.039	.038	1.43	
N3672	11 22.51	-9 31.2	270.43	120.3	.SASS..	5	W100V	S A	2	1.61	.28	1.55	
	5.10	-32.9	47.55	-24.1			3	S AF	3 S	.029	.022	1.57	
N3669	11 22.61	57 59.8	143.35	56.1	.SB.6*/	6	P048C			1.37	.55	1.24	
	5.68	-32.9	55.87	1.9			2.1			.046	.042	1.26	
N3673	11 22.74	-26 27.7	280.10	138.9	.SBT3..	3	W100V			1.55	.16	1.51	
	4.98	-32.9	32.28	-26.7	SX3	3	3.7		3 S	.034	.028	1.54	
A1122+38	11 22.8	38 19	176.33	73.7	.P.....		P048N			1.13	.14	1.10	
	5.41	-32.9	58.94	-7.0			1.7			.039	.038	1.12	
A1122+54	11 22.80	54 39.4	147.04	59.0	.L...P.	-2	P200C			1.21	.80	1.02	
MK 40	5.62	-32.9	58.55	.4			2.7			.075	.100	1.05	
A1122+23	11 22.9	23 5	220.73	87.7	.SBS3..	3	P048C			1.09	.00	1.09	
	5.29	-32.9	70.09	-13.5			1.8			.061	.058	1.11	
N3675	11 23.41	43 51.7	163.67	68.7	.SAS3..	3	W060V	S G	3	1.77	.26	1.71	
	5.46	-32.9	66.19	-4.4	S 2	3	3.6		03 S	.034	.026	1.73	
A1123-35	11 23.47	-35 7.3	283.91	148.6									
	4.92	-32.9	24.29	-27.0									
A1123+03	11 23.5	3 46	258.45	106.6									
	5.17	-32.9	58.78	-20.3									
N3677	11 23.55	47 15.0	157.42	65.7	PLAR...	-1	P048C			1.31	.07	1.29	
	5.50	-32.9	64.05	-2.9			2.1			.051	.054	1.32	
N3674	11 23.62	57 19.5	143.86	56.7	.L....	-2	W060V			1.30	.43	1.19	
	5.65	-32.9	56.49	1.7			2.5		4 S	.048	.045	1.22	
10691	11 23.88	59 25.8	141.68	54.9						.88	.17	.84	
MK169	5.69	-32.9	54.78	2.7						.042	.045		
N3681	11 23.89	17 8.3	236.14	93.4	.SXR4..	4	W100V	S G	3	1.40	.02	1.40	*
	5.25	-32.9	67.85	-15.6	S N .		3.6	DS G	03	.039	.031	1.42	
A1123+64	11 23.93	64 24.8	137.29	50.4	.P.....		P048N			1.25	.29	1.19	
MK170	5.81	-32.9	50.57	4.9			1.8			.039	.038	1.22	
A1124+35	11 24.13	35 31.3	183.51	76.3						.93	.20	.89	
MK423	5.38	-32.9	70.22	-8.0						.075	.100		
N3684	11 24.58	17 18.3	235.99	93.3	.SAT4..	4	W100V	S F	2	1.51	.14	1.48	
	5.25	-32.9	68.07	-15.4	S S N	5	3.7	S FG	3 S	.031	.025	1.50	
A1124+79	11 24.6	79 16	127.84	36.9	.P.....		P048N			1.22	.22	1.17	
	6.74	-32.9	37.33	11.4			1.8			.071	.071	1.20	
N3683	11 24.72	57 9.2	143.82	56.9	.SBS5S.	5S	W060V	SI *AF*		1.30	.37	1.21	
	5.63	-32.9	56.72	1.8	S *		2.6			.040	.033	1.23	
N3682	11 24.75	66 51.9	135.31	48.2	.SAS0*.	0*	W060V			1.31	.15	1.27	
	5.87	-32.9	48.48	6.1			2.8			.045	.042	1.30	
N3686	11 25.12	17 30.0	235.72	93.2	.SBS4..	4	P048C			1.52	.10	1.49	
	5.25	-32.9	68.28	-15.2	S S NK-	3	2.5		SVS	.031	.026	1.51	
N3687	11 25.36	29 47.3	200.63	81.7	PSXR4S.	4	P048C	S AF		1.31	.00	1.31	
	5.33	-32.9	71.51	-10.2	S 4	4*	2.2	S G		.036	.033	1.33	
N3691	11 25.55	17 11.8	236.56	93.5	.SB.3S.	3	P048C			1.10	.11	1.07	
	5.25	-32.9	68.21	-15.2	S		1.7			.034	.029	1.09	
N3689	11 25.55	25 56.2	212.72	85.3	.SXT5..	5	W060V	S AF		1.21	.14	1.18	*
	5.30	-32.9	71.32	-11.8	S 5	3*	2.6		3 S	.042	.036	1.20	
A1125-36	11 25.6	-36 15	284.78	149.9	.SBR4*.	4*	P048C						
	4.93	-32.9	23.39	-26.6									
N3690	11 25.69	58 50.0	141.92	55.5	.18.9P.	9	P200C	I A	4	1.38	.10	1.36	
MK171	5.65	-32.9	55.41	2.6	S T		3.8	I P*A *		.042	.042	1.37	
10694	11 25.72	58 50.4	141.91	55.5	.SB.9P*	9	P200C		1	1.07	.08	1.05	
MK171	5.65	-32.9	55.41	2.6	*T		3.2	I P A *		.050	.050	1.06	
N3692	11 25.8	9 41	251.14	100.9	.S.+. .	3	P048N			1.52	.59	1.38	
	5.20	-32.9	63.58	-17.8			1.7			.039	.038	1.39	
N3683A	11 26.41	57 24.5	143.21	56.8	.SBT5..	5	W060V			1.39	.13	1.36	
	5.61	-33.0	56.64	2.1			3.0		3 S	.037	.033	1.38	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _c (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _B m.e. (21)	(U-B) _B m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _H m.e. (28)	V ₀ ΔV (29)			
N3641				.20												-155		
I2738				.19												10353	10341	
N3643				.20											0 1 101	-12		
A1119+69				.29												-156		
N3646.	11.8 11.61	11.85 .07	13.3 14.2	.18 11.50	0.64 .03	-0.10 .05	0.75 .03	0.07 .04	.54 -.17						4274*	151	PT	
N3642	12.4 11.51	11.6 .1	15.1	.24 11.29	0.47 .05		*		.39						0 2 43	4194		
N3649				.18											1623	1728	T	
N3652				.19											0 1 50	105		
N3650				.18												-80		
N3655	12.3 12.78	12.30 .07	12.8	.18	0.66 .03	0.10 .03	*	*								4		
N3656				.22												-77		
V 22				.24												-96		
N3660				.22											2828	2910	PS	
N3657				.18											0 1 70	82		
N3659	12.9 12.81		13.6	.21												-199		
N3662				.19												77		
N3658				.19												-90		
N3666	12.6 12.36		14.1	.20												-171		
N3664A				.20												8		
N3664	12.9 12.72		14.1	.19												-119		
V251	12.3	11.70		.19	0.94	*	*	*	.87	1.04*	.78*	1.06			1394	-154	P	
N3665	11.94	.09	13.9	11.44	.05					1 1 1	.24*	1 .01	2.56*		1 1 19	1241		
A1122-13				.25											2002	-153	P	
A1122+64				.26											0 1 50	10		
N3672	11.8 11.66	*	13.9	.24	*	*									5383	5169		
N3669				.23											1 1 13	-214		
N3673	12.9 12.41		14.6	.33											3723	3850	PT	
A1122+38				.19											1 1 9	127		
A1122+54		*		.22	*	*									1939	1737		
12 26=V144				.18											0 1 75	-202		
A1122+23				.20												100		
N3675	11.8 11.27	10.9 .15	13.9	10.49 .42	*	*										-249		
A1123-35		*		.20												6		
A1123+03				.20											6147	6232	P	
N3677				.20											0 3 23	85		
N3674				.23											0 3 23	85		
I0691		*		.24	*	*									6563	6497		
N3681	12.8 12.52	12.40 .09	14.2	12.20	0.70 .04		*		.65						0 1 75	-66		
A1123+64				.26											701	735	P	
A1124+35				.19											0 2 37	34		
N3684	12.6 12.28	12.3 .15	14.3	12.00 .35	.64 .06				.56	2.39 3 2 4	.74				10119*	9854		
A1124+79				.23											0 3 33	-265		
72403				.27												-152	S	
N3683	13.2 13.40		13.8	.23												50		
N3682				.18												97		
N3686	12.3 12.03	12.0 .15	14.2	11.73 .19	.58 .06				.51						1318	1425		
N3687	13.0 12.85		14.2	.18											0 3 34	107		
N3691	13.1 13.53		13.6	.18											1221	1221		
N3689	12.8 13.10	13.0 .1	13.5	12.69	0.71 .02	0.01 .04	*	*	.62 -.06	1.72 6 4 3	.80 1.54				0 1 65	-93		
A1125-36				.43												992	1121	
N3690	12.1	*		.24	*	*									0 2 43	129		
V118	12.02	*	13.5												9554	9548		
I0694				.24	*	*									0 2 71	-6	P	
V118				.19											1422	1330		
N3692				.23											0 1 75	-92		
N3683A				.23											-105	83		
															0 1 70	188		
																97		
																139		
															1022	931	P	
															0 1 60	-91		
																-33	P	
																2691	2640	
															0 1 165	-51		
																2976	2710	
															0 1 25	-266	P	
															2999	3104		
															0 4 12	105	P	
															3115	3220		
															0 2 14	105		
																-126		
																98		

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D10) Log D ₀ (13)	Log Ae m.e. (14)
A1126+22 MK172	11 26.85	22 3.5	224.48	89.0									
A1127+22	5.27	-33.0	70.62	-13.0	.SX53*	3*	P048N			1.07	.02	1.06	
N3706	11 27.0	22 24	223.54	88.7						.039	.038	1.08	
	5.27	-33.0	70.77	-12.9	.LA.-..	-3	P048B			1.46	.18	1.42	
A1127+24	11 27.3	-36 8	285.09	149.7			2.0			.316	.129	1.48	
	5.94	-33.0	23.62	-26.2									
A1127+58	11 27.5	24 5	218.68	87.2	.SA59*	9	M082C			1.05	.04	1.04	*
	5.28	-33.0	71.37	-12.1			2.7			.061	.058	1.05	
	5.61	-33.0	55.90	2.6									
N3705	11 27.54	9 33.2	252.03	101.1	.SXR2..	2	W100V	SD G	3 S	1.70	.34	1.62	*
	5.20	-33.0	63.79	-17.5	S 3	4	3.9			.030	.024	1.64	
A1127+37	11 27.73	37 0.7	179.61	75.3									
MK424	5.37	-33.0	70.37	-6.7									
A1127+48	11 27.74	48 23.0	154.45	65.0									
MK173	5.47	-33.0	63.77	-1.7	.SBT8P.	8	P200C			.85	.09	.83	
I0701	11 28.2	20 45	228.47	90.4			2.7			.039	.038	.84	
	5.26	-33.0	70.43	-13.3	.SA..3*/	3*	W100V			1.76	.61	1.62	*
N3717	11 29.06	-30 2.0	283.14	143.0	S 3	5	3.7		3 S	.033	.031	1.66	
	4.99	-33.0	29.47	-25.6									
A1129+71D	11 29.11	71 5.3	132.00	44.5	.SB.1SP	1	P200C						
	5.93	-33.0	44.89	8.3									
A1129+71E	11 29.12	71 5.1	132.00	44.5	.E..2.PS	-5	P200C						
	5.93	-33.0	44.90	8.3									
A1129+71C	11 29.14	71 5.6	131.99	44.5	.LA..*P	-2	P200C						
	5.93	-33.0	44.89	8.3									
A1129+71A	11 29.14	71 6.0	131.99	44.5	.L...*P	-2*	P200C						
	5.93	-33.0	44.88	8.3									
A1129+62	11 29.63	62 47.0	137.71	52.1	.SB...S.		P048N			1.20	.22	1.15	
MK175	5.66	-33.0	52.30	4.8			1.8			.039	.038	1.18	
N3719	11 29.67	1 5.7	263.80	109.8	.SAT3..	3	P048C			1.30	.12	1.28	
	5.16	-33.0	57.54	-19.6			2.1	S F		.037	.033	1.30	
N3720	11 29.80	1 4.8	263.87	109.8	.S...2S.	2S	P048C			1.03	.03	1.02	0.45
	5.16	-33.0	57.55	-19.6	E 0		1.6	S P*		.046	.041	1.04	.04
A1129+53A	11 29.80	53 13.1	147.18	60.8	.LB...*P	-2	P200C			.75	.12	.72	
	5.50	-33.0	60.31	.7			2.5			.071	.071	.75	
N3718	11 29.83	53 20.7	147.02	60.7	.SBS1P.	1	W060V	P F *	4VS	1.94	.29	1.88	
	5.51	-33.0	60.22	.7	S NT.		4.0	S P FG		.033	.026	1.90	
A1129+53B	11 29.84	53 13.5	147.17	60.8	.SAS0SP	0	P200C						
	5.50	-33.0	60.31	.7									
A1129+53C	11 29.86	53 13.6	147.16	60.8	PS...0SP	0S	P200C						
MK176	5.50	-33.0	60.31	.7									
A1129+53D	11 29.93	53 13.7	147.14	60.8	.S.1SP/	1S	P200C						
	5.50	-33.0	60.32	.7									
A1129+53E	11 30.03	53 13.2	147.13	60.8	.S...6*/	6*	P048C			1.05	.69	.88	
	5.50	-33.0	60.33	.7			1.0			.039	.038	.90	
A1130+63	11 30.4	63 34	136.97	51.5	.S...6..	6	P048N			1.43	.54	1.30	
	5.67	-33.0	51.65	5.2			1.9			.039	.038	1.32	
A1130+55	11 30.62	55 20.9	144.52	58.9	.P.....		P048N			.61	.13	.58	
MK177	5.52	-33.0	58.66	1.7			.7			.050	.050	.61	
N3726	11 30.63	47 18.4	155.39	66.2	.SXR5..	5	W100V	S AF	4 S	1.78	.13	1.75	*
	5.43	-33.0	64.88	-1.8	S 5 K -	2	4.2	S F		.029	.021	1.77	
A1130+49	11 30.75	49 30.7	151.92	64.2	.I...9P.	10	P048N			1.14	.24	1.08	
MK178	5.45	-33.0	63.28	-.8			1.6			.039	.038	1.09	
N3725	11 30.86	62 9.9	138.01	52.8	.SB.5..	5	P048N			1.16	.10	1.14	
MK179	5.63	-33.0	52.90	4.7			1.8			.046	.045	1.16	
N3729	11 31.06	53 24.4	146.65	60.7	.SBR1P.	1	W060V			1.49	.16	1.45	
	5.49	-33.0	60.28	.9	P	3.2	.034	D FG	3 S	.026	.026	1.47	
N3732	11 31.69	-9 34.2	273.44	120.9	.SX50*	0*	W100V			1.11	.02	1.11	
	5.11	-33.1	48.56	-21.9	E 0		3.0	ISP*K *	4VS	.085	.053	1.14	
I0712	11 32.1	49 21	151.79	64.4						1.19	.18	1.15	
	5.43	-33.1	63.54	-.7						.075	.100		
N3733	11 32.30	55 7.7	144.38	59.2	.SX55*	5	P048C			1.68	.31	1.60	
	5.50	-33.1	58.98	1.8			2.4			.038	.036	1.62	
N3737	11 32.86	55 13.6	144.14	59.2	.LB....	-2	P048C			1.13	.03	1.12	
	5.49	-33.1	58.95	1.9			1.8			.066	.058	1.15	
A1133+16	11 33.0	16 15	241.45	95.1									
MK636	5.22	-33.1	69.18	-13.9									
N3735	11 33.06	70 48.5	131.75	44.9	.SA.5*/	5*	W060V	S F *	3 S	1.62	.62	1.47	
	5.81	-33.1	45.28	8.4	S 3	3*	3.0	S *G *		.033	.028	1.49	
N3738	11 33.08	54 48.0	144.56	59.6	.I...9..	10	W060V	I A *		1.41	.11	1.38	0.8
	5.48	-33.1	59.32	1.8	P		3.1	I P *	1	.032	.024	1.39	.1
A1133+20	11 33.6	20 48	229.92	90.8									
	5.24	-33.1	71.60	-12.1									
N3755	11 33.90	36 41.3	177.96	76.1	.SXT5P.	5	W100V			1.51	.32	1.44	
	5.32	-33.1	71.62	-5.7			3.5		3 S	.034	.029	1.46	
I2943	11 33.98	55 7.4	144.00	59.3	.S...1S.	1S	P048C			.61	.00	.61	
MK 41	5.47	-33.1	59.12	2.0			3.6			.050	.050	.63	
N3756	11 34.08	54 34.4	144.58	59.8	.SXT4..	4	W060V	S AF	3 S	1.64	.26	1.58	
	5.46	-33.1	59.58	1.8	S 5	3	3.4	S AF		.030	.022	1.60	
N3759	11 34.18	55 6.0	143.98	59.4	.LX...*	-1	P048C			1.18	.00	1.18	
	5.47	-33.1	59.16	2.1			1.9			.067	.061	1.21	
N3759A	11 34.25	55 26.4	143.60	59.1	.SX.5P.	5	P048C			1.15	.03	1.15	
	5.47	-33.1	58.88	2.2			1.8			.039	.038	1.17	
N3764B	11 34.3	18 10	237.32	93.4	CE.1.PS	-6S	P048C			0.57	.09	0.55	
	5.23	-33.1	70.50	-12.9			.6			.050	.050	.58	
A1134+20A	11 34.30	20 15.0	231.72	91.4	.P.....		P048N			.85	.21	.80	
MK181	5.23	-33.1	71.51	-12.1			1.1			.039	.038	.82	
N3769	11 35.03	48 10.3	152.73	65.7	.SBR3*	3*	W060V	S *F		1.50	.44	1.40	
	5.39	-33.1	64.75	-.7	S 3 N		2.9	SD *FG*		.032	.026	1.42	
N3746	11 35.12	22 17.2	225.92	89.6	.SBR3..	3	P200C			1.13	.28	1.06	
	5.24	-33.1	72.50	-11.2			3.1			.039	.038	1.08	
N3745	11 35.13	22 18.0	225.88	89.5	.LBS-*	-3	P200C			.61	.24	.56	
	5.24	-33.1	72.50	-11.2			2.1			.075	.100	.59	
N3769A	11 35.13	48 9.7	152.72	65.7	.SB.9P*	9	W060V			1.01	.38	.92	
	5.39	-33.1	64.77	-.7			2.0			.038	.036	.93	
A1135+07	11 35.2	-7 0	272.89	118.5	.SBT5*	5	P048C			1.14	.00	1.14	
	5.13	-33.1	51.24	-20.5			1.9			.061	.058	1.16	
N3748	11 35.21	22 18.2	225.89	89.5	.LB.0S/	-2*	P200C			.88	.40	.78	
	5.24	-33.1	72.52	-11.2			2.5			.042	.045	.80	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m' ₂₅ m' ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _e (U-B) _T (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
A1126+22				.18											10020	9951
A1127+22				.18											0 1 100	-69
N3706	12.7			.43											6499	6431
A1127+24	12.30		14.0	.18											1 1 10	-68
A1127+58		14.60		.23	0.51	-.08	*	*							7570	-265
N3705	12.2	.08	14.6	.19	.03	.03									0 1 24	7511
A1127+37	11.77		14.3	.19												-59
A1127+48				.21												103
I0701				.18											2012	-126
V 3				.18											0 2 71	2014
N3717	12.6	*	14.2	.36	*	*	*	*							8339	8396
A1129+710	12.12														0 1 220	57
72407+V172															6167	6092
A1129+71E															0 1 86	-75
72407+V172																-254
A1129+71C				.29	*	*	*	*							15715	15872
72407+V172				.29	*	*	*	*							0 1 105	157
A1129+71A				.29	*	*	*	*							15516	15673
72407+V172				.29	*	*	*	*							0 2 38	157
A1129+62	14.2	.15	14.5	.25	.90	.28			.77						15808	15965
N3719				.21	*	*			.19						0 2 38	157
N3720	13.0	13.95	11.7	.21	0.64	-.08	0.69	-.01							16095	16252
A1129+53A	13.54	.09	13.9	.22	.04	.04	.04	.04							0 1 105	157
12 27+V150		.15	13.5	.22	.88	.28									0 1 105	123
N3718	12.4	11.26	15.1	.22	.73	.07			.62			1.59			80	-160
A1129+53B	11.28	.11	15.1	.22	.07							4 .01	1.79		1014	1095
12 27															81	80
A1129+53C				.22											*	80
12 27				.22											*	80
A1129+53D				.22											7926*	8006
12 27				.22											0 3 33	80
A1129+53E				.22											*	80
12 27				.26												80
A1130+63				.22												127
A1130+55															1841	1931
N3726	11.7	10.95	14.4	.20	0.51	*			.43			1.98			0 1 220	90
A1130+49	11.06	.09	10.64	.21	.04	*						1 .01	.98		765*	818
N3725		*		.25	*	*						1 .01			1 1 14	53
N3729	13.0	12.00	13.9	.22	.62	.07									215	278
N3732	12.62	.11	13.6	.24	.07										1 2 23	63
	12.9														3182	3303
	13.26														0 1 55	121
I0712				.21												81
N3733				.22											9993	-198
N3737				.22											0 1 120	10056
A1133+16				.18											1841	63
N3735	12.6		13.9	.29											0 1 100	90
	12.50														5586	5676
N3738	12.2	12.1	11.6	.22	0.43	-.17	0.38	-.19							0 1 120	90
A1133+20	12.04	.2	13.7	.18	.02	.04	.03	.04							5245	5152
N3755				.19											0 1 100	-93
I2943		15.4	13.3	.22	.64	-.18			.54							157
N3756	12.5	12.15	14.5	.22	.06	.07			-.20						5795	5885
N3759	12.04	.11	11.72	.22	.63	.07			.52						0 1 100	90
N3759A				.23											1071	1159
N3764B		*		.18	*	*									0 1 40	88
22 52				.18												90
A1134+20A				.18												92
N3769	12.5		13.8	.21											6201	-84
	12.52														0 2 43	6127
N3746				.18											714	-74
V282				.18											0 1 95	772
N3745				.21												58
V282				.23											9240	9176
N3769A				.18											0 1 105	-64
A1135-07				.23											0 1 105	9352
N3748				.18											0 1 105	-64
V282															685	743
															0 1 95	58
															9477	9290
															1 0 20	-187
															8992	8928
															0 1 105	-64

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log A _e m.e. (13)	
N3750	11 35.25	22 15.1	226.06	89.6	.LX.-5.	-3*	P200C			.96	.10	.94		
	5.24	-33.1	72.51	-11.2			2.9			.051	.058	.97		
N3751	11 35.29	22 12.9	226.19	89.6	.L...-P	-3*	P048C			.61	.14	.58		
	5.24	-33.1	72.51	-11.2			7			.075	.100	.61		
N3753	11 35.29	22 15.6	226.05	89.6	.S.25/P	25	P200C			1.31	.51	1.19		
	5.24	-33.1	72.53	-11.2			3.2			.039	.038	1.21		
N3754	11 35.30	22 15.7	226.04	89.6	.SB.35P	35	P200C			.64	.08	.62		
	5.24	-33.1	72.53	-11.1			2.3			.039	.038	.64		
N3773	11 35.63	12 23.4	250.54	99.1	.LA...*	-2*	M100V			1.21	.07	1.19		
	5.20	-33.1	67.19	-14.6			3.2	0 P*K *	4	.046	.038	1.22		
N3783	11 36.5	-37 28	287.46	151.2	.SBR1..	1	S030V			1.28	.09	1.26		
	5.00	-33.1	22.94	-24.4			1.7		5	.158	.100	1.31		
N3780	11 36.66	56 32.8	141.92	58.2	.SASS*.	5	W060V	S AF	4VS	1.49	.08	1.47		
	5.45	-33.1	58.12	3.0	S 5	3	3.3	S AF	3 S	.032	.026	1.49		
N3782	11 36.67	46 47.4	154.45	67.1	.SXS6*.	6*	W060V	I A		1.23	.16	1.19		
	5.36	-33.1	65.96	-1.1	S 5P		2.7	I *A		.034	.029	1.21		
N3786	11 37.08	32 11.2	191.59	80.5	.SXT1P.	1	P200V			1.38	.22	1.33		
	5.28	-33.1	73.70	-6.9			4.0		04	.031	.024	1.35		
N3788	11 37.12	32 12.5	191.51	80.5	.SXT2P.	2	P200V			1.34	.46	1.23		
	5.28	-33.1	73.71	-6.9			3.6		5	.031	.025	1.25		
A1137+46	11 37.4	46 13	155.19	67.7	.SA.9..	9	P048N			1.46	.00	1.46		
	5.35	-33.1	66.47	-1.2			2.5			.046	.045	1.47		
N3795	11 37.4	58 54	139.56	56.1	.S.....		1.38			1.38	.53	1.25		
	5.47	-33.1	67.14	4.0			.039			.039	.038	1.27		
N3799	11 37.57	15 36.2	244.80	96.1	.SBS3*P	3	P200C			.97	.18	.93		
	5.21	-33.1	69.67	-13.1			2.9			.038	.036	.95		
N3800	11 37.63	15 37.2	244.79	96.1	.SXT3*P	3	P200C			1.33	.50	1.21		
	5.21	-33.1	69.69	-13.1			3.3			.044	.041	1.23		
N3801	11 37.69	18 0.4	239.04	93.8	.L...\$P	-2*	P048N			1.50	.22	1.45	1.05	
	5.21	-33.1	71.09	-12.2			2.4			.051	.058	1.47	.07	
N3802	11 37.7	18 3	238.93	93.8	.S.....		P048N			1.14	.57	1.00		
	5.21	-33.1	71.12	-12.2			1.3			.039	.038	1.02		
A1137+28	11 37.8	28 40	204.23	83.8						.93	.29	.86		
	5.26	-33.1	74.25	-8.2						.042	.045			
N3808	11 38.12	22 42.3	225.40	89.4	.SXT5*P	5	P200C			1.25	.26	1.19		
	5.23	-33.1	73.29	-10.4			3.4			.046	.045	1.21		
N3808A	11 38.14	22 43.5	225.34	89.4	.I.0.\$P	05	P200C			.83	.20	.79		
	5.23	-33.1	73.30	-10.4			2.6			.046	.045	.81		
A1138+35	11 38.17	35 29.2	180.40	77.5						.79	.25	.74		
Mk426	5.28	-33.1	72.90	-5.4						.075	.100			
N3804	11 38.20	56 28.7	141.64	58.3	.SXS6..	6	P048C			1.38	.16	1.35		
	5.43	-33.1	58.29	3.1			2.2			.036	.033	1.37		
N3810	11 38.40	11 44.9	252.95	99.9	.SAT5..	5	W100V	S F	4	1.63	.14	1.59	1.15	
	5.19	-33.2	67.22	-14.2	S 5	1	3.9		3VS	.031	.024	1.61	.05	
N3811	11 38.60	47 58.2	151.97	66.1	.SBR6*P	6*	P048N			1.38	.11	1.36		
Mk185	5.35	-33.2	65.29	-3			2.2			.046	.045	1.38		
N3813	11 38.67	36 49.5	176.20	76.3	.SAT3*..	3	W060V	S A		1.36	.27	1.29	*	
	5.29	-33.2	72.42	-4.8	S		2.8	S A *	4VS	.033	.028	1.31		
N3818	11 39.41	-5 52.7	273.60	117.6	.E.5...*	-5	W060V			1.33	.17	1.29	0.80	
	5.13	-33.2	52.71	-19.2	E 2P *		2.9	B *K	3 S	.061	.045	1.33	.09	
A1139+18	11 39.8	18 36	238.31	93.5	.IB.9..	10	P048N			1.48	.48	1.37		
	5.21	-33.2	71.83	-11.5			2.1			.039	.038	1.38		
N3824	11 40.07	53 3.6	144.79	61.6	.SAS1\$P	1	P048C			1.20	.26	1.14		
	5.37	-33.2	61.33	2.0			1.7			.038	.037	1.16		
A1140+59	11 40.42	59 23.0	138.54	55.8	.S..9..	9	P048N			1.24	.06	1.22		
D 96	5.43	-33.2	55.90	4.6			9			.039	.038	1.23		
N3829	11 40.59	52 59.4	144.46	61.7	.SBS3*.	3	P048C			1.08	.19	1.03		
	5.36	-33.2	61.45	2.1			1.5			.038	.035	1.05		
A1140+36	11 40.81	36 23.3	176.84	76.9										
Mk427	5.27	-33.2	73.00	-4.6										
N3834	11 41.0	19 22	236.66	92.8						1.27	.13	1.24		
	5.21	-33.2	72.48	-11.0						.075	.100			
N3835	11 41.38	60 23.9	137.53	54.9	.S..3\$P	35	P048C			1.31	.35	1.23		
	5.42	-33.2	55.06	5.1			1.8			.036	.033	1.25		
N3842	11 41.45	20 13.6	234.30	92.1	.E.3...*	-5	P048N			1.08	.09	1.06		
	5.21	-33.2	72.99	-10.6			1.6			.051	.058	1.09		
N3838	11 41.54	58 13.5	139.39	56.9	.SA.0\$.	0	P048C			1.23	.35	1.15		
	5.40	-33.2	57.00	4.3			1.7			.037	.035	1.18		
N3846A	11 41.57	55 18.8	142.00	59.6	.IBS9..	10	P048C			1.32	.08	1.31		
	5.37	-33.2	59.54	3.1			2.1			.039	.038	1.32		
N3846	11 41.81	55 57.0	141.32	59.0	.SA.5\$.	55	W060V			1.08	.13	1.05		
	5.37	-33.2	59.00	3.4			2.4			.038	.037	1.07		
N3865	11 42.31	-8 57.4	276.72	120.9	.SXS3\$.	3	P048C			1.37	.13	1.34		
	5.13	-33.2	50.22	-19.3	S 3 N		2.2	S F		.054	.046	1.36		
N3862	11 42.50	19 53.1	235.73	92.5	.E.0...*	-5	P048N			1.21	.00	1.21	0.80	
	5.20	-33.2	73.04	-10.5			2.0			.051	.058	.93	.03	
A1142+59	11 42.8	59 15	138.17	56.0						.051	.051			
	5.39	-33.2	56.16	6.8						.051	.058			
N3850	11 42.92	56 9.9	140.85	58.9	.SBS5*.	5*	W060V			1.36	.27	1.30		
	5.36	-33.2	58.89	3.6			2.8			.037	.034	1.32		
N3872	11 43.24	14 2.7	250.78	98.1	.E.5...*	-5	W060V			1.35	.16	1.31	0.80	
	5.19	-33.2	69.68	-12.3	E 4		2.9	F4 K	3 S	.058	.061	1.34	.09	
N3870	11 43.28	50 28.7	147.02	64.1	.L...\$P	-2	P048N			1.11	.10	1.08		
Mk186	5.32	-33.2	63.75	1.4			1.7			.042	.045	1.11		
N3877	11 43.50	47 46.5	150.72	66.6	.SASS*.	5	W060V	S AF	1	1.73	.55	1.60		
	5.30	-33.2	65.96	.4	S 3 N		3.3	S AF		.031	.025	1.62		
A1143+71	11 43.76	71 54.2	130.04	44.2										
Mk187	5.55	-33.2	44.60	9.6										
A1143+35	11 43.82	35 7.8	179.90	78.3										
Mk429	5.24	-33.2	74.10	-4.5										
A1144-03A	11 44.03	-3 34.7	273.65	115.6	.SXT3\$P	3	P200C			1.09	.20	1.04		
	5.14	-33.2	55.29	-17.5			3.1			.061	.058	1.06		
A1144-03B	11 44.19	-3 33.9	273.71	115.6	.SBS3*P	3	P200C			1.29	.39	1.20		
	5.14	-33.2	55.31	-17.5			3.3			.061	.058	1.22		
N3885	11 44.25	-27 38.6	285.92	140.7	.SAS0..	0	W100V			1.23	.30	1.16		
	5.09	-33.2	32.80	-22.1	S 3	55	3.0		4	.052	.043	1.20		
A1144-03C	11 44.27	-3 32.4	273.72	115.5	.SBS5*P	5	P200C			1.11	.21	1.06		
	5.14	-33.2	55.35	-17.4			3.1			.061	.058	1.08		
N3887	11 44.54	-16 34.6	281.56	129.0	.SBR4..	4	W100V	S F	3*	1.52	.09	1.50	1.10	
	5.12	-33.2	43.33	-20.3	S 5 K	4*	3.8		3 S	.035	.027	1.52	.04	

NGC, IC, A Zw, VV (14)	Magnitudes				Color indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₆ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T m.e. (23)	Log S _R N _N N _N N _N (24)	α ₋ α ₊ (25)	Log S _H N _N A ₂₁ (26)	RI HI (27)	V N _N N ₀ m.e. (28)	V ₀ ΔV (29)	
N3750				.18										9014	8950	P
V282				.18										0 1 105	-64	
N3751				.18										9594	9529	P
V282				.18										0 1 105	-65	
N3753				.18										8687	8623	P
V282				.18										0 1 105	-64	
N3754				.18										9127	9063	P
V282				.18										0 1 105	-64	
N3773	13.0 13.08	*	13.8	.19	*	*									-109	
N3783	12.8 12.89	*	13.9	.44	*	*								3033	2770	
N3780	12.6 12.27		14.4	.23										0 2 70	-263	
N3782	12.9 13.08		13.7	.20										2768	2865	
N3786				.19										0 1 40	97	
V228				.19											52	
N3788				.19										2761	2745	P
V228				.19										0 1 95	-16	
A1137+46				.20										2339	2323	P
N3795				.24										0 1 95	-16	
N3799				.19											50	S
V350				.19											108	
N3800				.19										3573	3479	P
V350				.19										0 1 95	-94	
N3801	13.0 .1	13.7 14.8	12.68	.18	0.93 .04	0.34 .04	0.95 .04	0.39 .04	.84 .30	2.12* 3 1 0	.53*		-1.38*	3556	3462	P
N3802	14.5 .15	13.6	.18	.18	.93 .06	.57 .07								0 1 95	-94	
A1137+28			.18	.18										3257	3174	
N3808			.18	.18										0 1 165	-83	
V300			.18	.18											-83	
N3808A			.18	.18										2970	2937	
V300			.18	.18										0 1 55	-33	
A1138+35			.19	.19										7030	6969	P
N3804			.23	.23										0 1 22	-61	
N3810	11.8 11.50	11.25 .08	12.5 13.9	.19 10.94 .21	0.55 .02	-.06 .05	0.66 .03	0.00 .04	.47 -.12	1.08* 2 0 1	1.00* 1.00*		2.96*	7210	7149	P
N3811			.19	.19										0 1 22	-61	
N3813	12.6 12.77	12.30 .08	13.3 11.88	.19 .23	0.58 .03	-.07 .03	*	*	.48 -.14	.90* 1 1 0	.81*		2.46*	1511	1511	
N3818	12.7 12.54	12.7 .13	12.2 13.9	.23 12.45	0.90 .05	*	0.96 .05	0.50 .06	.83					0 1 150	6	
A1139+18			.18	.18										1498	1317	
N3824			.22	.22										0 1 65	-181	
A1140+59			.24	.24											-79	
N3829			.22	.22								.63 1 .01		1319	1430	
A1140+36			.19	.19										1 0 15	111	
N3834			.18	.18											82	
N3835			.24	.24										6397	6401	
N3842			.18	.18										0 2 71	4	
N3838			.23	.23											-75	S
N3846A			.23	.23											116	
V320			.23	.23										6186	6115	
N3846			.23	.23										0 1 120	-71	
N3865	13.0 12.86		14.2 13.1	.23 .18	1.01 .02	0.48 .06	1.03 .02	0.50 .03	.91 .47	2.78 19 6 9	.74 .90		-3.72		106	
N3862		13.65 .05	14.7	.18 13.38 .24										6231	-190	
A1142+59			.23	.23										0 2 51	6159	
72421														3095	-72	
N3850				.23										0 1 266	3206	
N3872	12.8 12.56	12.65 .13	12.1 14.0	.19 12.41 .21	0.95 .05	*	1.00 .05	0.54 .06	.88						97	
N3870		*		.21	*	*								3109	3011	
N3877	12.0 11.78		13.9	.21 .30								.45 1 .01		0 1 75	-98	
A1143+71			.30	.30										718	790	
A1143+35			.19	.19										1 3 30	72	
A1144-03A			.22	.22										828	887	
V 35			.22	.22										0 1 40	59	
N3885	12.9 13.27		13.5	.33										9534	9697	
A1144-03C			.22	.22										0 1 220	163	
V 35			.22	.22										1346*	1346	
N3887	11.6 11.54	11.6 .13	12.6 13.8	.26 11.26	0.64 .05	0.06 .05	0.72 .04	0.15 .04	.56 -.00					0 2 71	0	
														5108	4938	P
														0 1 50	-170	
														5008	4838	P
														0 1 50	-170	
															-242	
														5396	5226	P
														0 1 75	-170	
														1130	917	
														0 1 79	-213	

NGC IC, A MK, DDO (1)	Coordinates				Classification						Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (I) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D ₀) Log Do (13)	Log Ae m.e. (14)	
N3888	11 44.91	56 14.7	140.31	58.9	.SXT5..	5	W060V	S F		1.26	.10	1.23		
MK188	5.33	-33.2	58.96	3.9	S 3	4*	2.8	S P F *	4 S	.035	.031	1.25		
A1145-55	11 45.4	55 19	141.06	59.8	.S..65.	65	P048N			1.35	.57	1.21		
	5.32	-33.2	59.80	3.6			1.7			.039	.038	1.23		
N3892	11 45.47	-10 41.2	278.85	122.9	.LBT+..	-1	W060V	R K	4VS	1.44	.10	1.42		
	5.13	-33.2	48.92	-18.9	SX0*		3.1			.062	.057	1.45		
N3893	11 46.01	48 59.4	148.16	65.7	.SXT5*.	5*	L036V	S FG	3VS	1.64	.19	1.59		
	5.28	-33.2	65.23	1.3	S 5 N	1*	3.0			.031	.025	1.61		
N3894	11 46.18	59 41.7	137.13	55.8	.E..4+..	-5	W060V			1.38	.17	1.34		
	5.34	-33.2	55.95	5.4			3.0			.059	.043	1.38		
A1146-28	11 46.23	-28 1.0	286.55	141.2	.SB.9..	9	P048N			1.32	.05	1.31		
D239	5.09	-33.2	32.57	-21.7	S	9	2.2			.046	.045	1.33		
N3896	11 46.31	48 57.2	148.11	65.7	.SB.0*P	0	P048C			1.24	.14	1.21		
	5.27	-33.2	65.29	1.3						.037	.035	1.24		
A1146+24	11 46.35	24 7.0	222.63	88.8	.I..9..	10	P048N			1.31	.00	1.31		
D 97	5.20	-33.2	75.53	-8.1	I	9	2.2			.039	.038	1.32		
N3897	11 46.4	35 18	178.50	78.4	.S..4+..	4	P048N			1.33	.00	1.33		
	5.23	-33.2	74.50	-3.9			2.2			.039	.038	1.35		
N3895	11 46.40	59 42.7	137.07	55.8	.SBT1*.	1	W060V			1.16	.13	1.13		
	5.33	-33.2	55.95	5.4			2.6		4 S	.036	.033	1.16		
N3905	11 46.53	-9 27.1	278.52	121.7	.SBT4..	4	P048C			1.25	.12	1.22		
	5.14	-33.2	50.16	-18.4			2.0			.055	.048	1.24		
N3900	11 46.57	27 18.1	209.81	85.8	.LAR+..	-1	W060V	SD *G	3*	1.54	.25	1.48		
	5.21	-33.2	76.15	-6.9	S 4	5	3.2	SD *G	3	.037	.031	1.50		
N3898	11 46.60	56 21.8	139.80	58.9	.SAS2..	2	P200V	SD *K	4	1.64	.23	1.59		
	5.31	-33.2	59.96	4.2	S 2	3	4.5	S *K	4 L	.030	.024	1.61		
N3904	11 46.69	-28 59.9	286.99	142.2	.E..2+..	-5*	W100V	E3 K		1.35	.13	1.32		
	5.09	-33.2	31.47	-21.7	E 2	3	3.4		3	.112	.056	1.37		
N3902	11 46.73	26 24.0	213.56	86.7	.SAS3*.	3	P048C			1.26	.09	1.24		
	5.20	-33.2	76.09	-7.2			2.0			.037	.033	1.26		
N3906	11 47.05	48 42.2	148.22	66.0	.SB57..	7	P048C			1.29	.04	1.28		
	5.27	-33.2	65.56	1.3			2.1			.036	.033	1.29		
A1147+52	11 47.4	52 9	143.81	62.9	.S..6*	6*	P048N			1.37	1.00	1.13		
	5.28	-33.2	62.70	2.7			1.3			.039	.038	1.15		
N3912	11 47.49	26 45.5	212.16	86.4	.SXS3SP	3	PG48C			1.24	.22	1.18		
	5.20	-33.2	76.30	-6.9	S 4	5*	2.1	I P *		.035	.031	1.20		
A1147+26	11 47.7	26 15	214.31	86.9	.S..P.		P048N			1.35	.43	1.24		
	5.20	-33.2	76.28	-7.0			1.8			.046	.045	1.26		
N3913	11 48.01	55 38.0	140.12	59.7	PSAT7*.	7	P048C			1.42	.02	1.42		
	5.28	-33.2	59.70	4.1			2.4			.037	.035	1.44		
A1148+56	11 48.12	56 44.0	139.11	58.6	.IB.9..	10	P048N			1.21	.05	1.20		
D 98	5.29	-33.2	58.73	4.5	SX	8*	1.9			.039	.038	1.21		
N3917	11 48.13	52 6.2	143.66	62.9	.SA.6*.	6*	W060V	SI *AF		1.69	.54	1.57		
	5.27	-33.2	62.79	2.8	S NK-		3.2	S AF		.031	.025	1.59		
N3916	11 48.21	55 25.3	140.26	59.9	.SA.3*/*	3	P048C			1.25	.51	1.51		
	5.28	-33.2	59.90	4.0			1.6			.037	.033	1.15		
A1148+39	11 48.25	39 9.3	166.23	74.9	.I..9..	10	P048N			1.59	.36	1.51		
D 99	5.22	-33.2	72.74	-2.1		9*	2.4			.046	.045	1.52		
N3921	11 48.47	55 21.4	140.26	59.9	PSASOP.	0	P200C		4	1.35	.18	1.30		
MK430	5.28	-33.2	59.97	4.0			3.6			.037	.034	1.33		
N3923	11 48.50	-28 31.7	287.29	141.8	.E..4+..	-5	W100V	E4 K		1.46	.19	1.42	1.00	
	5.11	-33.2	32.22	-21.3	E 3		3.5		3 S	.100	.049	1.47	.09	
A1148+43	11 48.6	43 22	156.46	71.1										
	5.23	-33.2	69.91	-5										
N3931	11 48.60	52 16.7	143.33	62.8	.LA..*.	-3	W060V			1.14	.09	1.12		
	5.26	-33.2	62.68	2.9			2.6		3VS	.049	.046	1.15		
N3930	11 49.17	38 17.6	168.20	75.8	.SXS5..	5	P048V			1.58	.10	1.55		
	5.22	-33.2	73.41	-2.3			2.6			.040	.035	1.57		
N3928	11 49.18	48 57.7	147.17	65.9	.E..0+..	-5	P048C			1.25	.00	1.25		
MK190	5.24	-33.2	65.54	1.7			2.1			.049	.047	1.28		
A1149+46	11 49.3	46 2	151.44	68.6										
	5.23	-33.2	67.94	.6										
A1149+52	11 49.50	52 23.1	142.95	62.8	.SBT9..	9	P048C			1.47	.07	1.45		
D100	5.25	-33.2	62.66	3.1	SB	8	P048C			.050	.050	1.46		
N3936	11 49.80	-26 37.6	286.99	139.8	.SB535.	3	P048C			1.60	.70	1.43		
	5.12	-33.2	34.13	-20.7	S 3	2.1				.034	.029	1.46		
N3938	11 50.22	44 24.0	153.88	70.2	.SAS5..	5	W100V	S FG	2	1.73	.04	1.73		
	5.22	-33.2	69.32	-2	S 5	1	4.2	S F	03 S	.034	.024	1.75		
N3941	11 50.33	37 15.9	170.72	76.8	.LB50..	-2	W060V	B P*K *	3	1.58	.18	1.54		
	5.20	-33.2	74.19	-2.5	E 3		3.3	D P K	4 S	.053	.035	1.57		
A1150-04	11 50.4	-4 8	276.60	116.6						1.32	.14	1.29		
	5.15	-33.2	55.44	-16.1						.075	.100			
A1150+70	11 50.48	70 42.7	129.89	45.6										
MK191	5.34	-33.2	45.90	9.7										
N3945	11 50.60	60 57.3	135.34	54.8	.LBT+..	-1	W060V	B GK*	3	1.74	.18	1.70	1.10	
	5.27	-33.2	55.03	6.3	SB0		3.7		3VS	.045	.037	1.73	.09	
N3947	11 50.8	21 2	235.51	92.1						1.20	.00	1.20		
	5.18	-33.2	75.30	-8.2						.042	.045			
N3949	11 51.08	48 8.3	147.64	66.8	.SAS4*.	4	W060V	SI *F	2	1.47	.21	1.42		
	5.22	-33.2	66.40	1.7	S 3 N		3.1	S *F *		.031	.025	1.44		
A1151+46	11 51.09	46 29.3	150.06	68.3						.79	.08	.78		
MK 42	5.22	-33.2	67.76	1.1						.075	.100			
N3952	11 51.12	-3 43.1	276.60	116.2	.I..0P5	0	P048C			1.19	.35	1.11		
	5.15	-33.2	55.89	-15.8	P		1.6	I P A *		.054	.046			
N3953	11 51.22	52 36.5	142.22	62.6	.SBR4..	4	W060V	S F	5	1.82	.26	1.76		
	5.23	-33.2	62.59	3.4	S 4	1	3.7	S FG	4 S	.030	.022	1.78		
I2974	11 51.3	-4 52	277.47	117.4						1.44	.59	1.30		
	5.15	-33.2	54.85	-16.1						.075	.100			
A1151+09	11 51.4	9 54	262.47	102.8										
	5.16	-33.2	67.86	-11.8										
N3955	11 51.41	-22 53.2	286.15	135.9	.I..0+..	0	W100V		2	1.50	.39	1.41	0.85	
	5.13	-33.2	37.83	-19.8	S 3	5	3.4	SIP*		.046	.036	1.44	.03	
N3956	11 51.46	-20 17.3	285.21	133.2	.SAS5*.	5	W100V			1.54	.45	1.43		
	5.13	-33.3	40.32	-19.4	S 6	7*	3.4	S F	4 S	.033	.027	1.45		
N3957	11 51.48	-19 17.5	284.83	132.1	.LA..*/*	-1	W100V			1.55	.63	1.40		
	5.13	-33.3	41.27	-19.2	E 8		3.3	SD *K *	3 S	.054	.037	1.43		
N3958	11 51.95	58 38.7	136.70	57.0	.SB51..	1	W060V	SD *G		1.21	.33	1.13		
	5.24	-33.3	57.22	5.7			2.5			.035	.031	1.16		
N3962	11 52.11	-13 41.8	282.66	126.4	.E..1+..	-5	W060V			1.46	.04	1.45		
	5.14	-33.3	46.65	-18.0	E 2		3.2	E K		.063	.049	1.49		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _g m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _E (U-B) _T (23)	Log S _R N _N N _H N ₊ (24)	α ₊ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N3888	13.0			.23											2443	2541
A1145+55	13.09		14.0	.23											0 2 43	98
N3892	12.9			.24												94
N3893	12.50		14.3													-194
N3894	11.0	11.1		.21											968	1034
	10.99	.15	13.7	10.73											1 3 11	66
				.24											3223	3337
															0 1 92	114
A1146-28				.33								1.09			1935	1693
N3896				.21								1.01			1 0 10	-242
A1146+24				.18												66
N3897				.19											516	466
N3895				.24											1 0 100	-50
															6410	6412
															1 1 10	2
N3905				.24												114
															5747	5557
N3900	12.7	12.20		.18	0.82		*		.73						1 1 26	-190
	12.29	.09	14.1	11.84	.04										1702	1667
N3898	12.0	11.7		.23	.88				.78						0 1 50	-35
	11.67	.15	14.2	11.28	.06										1038	1137
N3904	11.9	11.95	11.4	.34	0.99	0.65	0.99	0.68	.90						0 1 75	99
N3902	11.95	.09	13.4	11.59	.04	.06	.03	.03	.58						0 1 75	-244
				.18												-39
N3906				.21												65
A1147+52				.22												81
N3912	13.0			.18												-37
A1147+26	13.27		13.8	.18												-40
N3913				.23											855	952
															0 1 105	97
A1148+56				.23								.73			897	998
V273												1.01			1 0 15	101
N3917	12.8			.22								1.06			960	1041
N3916	12.40		14.3	.23								1.03			1 0 10	81
																96
A1148+39				.19								1.27			249	270
N3921				.23								1.02			1 0 10	21
12 28=V 31															5975	6070
															0 3 32	95
N3923	11.1	11.1	11.6	.33	1.00	*	1.02	0.64	.91						1788	1546
A1148+43	11.18	.13	12.9	10.74	.05		.04	.06							0 1 65	-242
22 54				.20											6810	6851
N3931				.22											0 1 80	41
N3930				.19												82
N3928				.21											990	1057
															0 2 43	67
A1149+46				.20											5880	5933
12 29															0 1 185	53
A1149+52				.22								.90			1020	1103
N3936	13.0			.32								1.01			1 0 10	83
N3938	12.83		13.9	.20					.46							-237
	11.6	10.91		.22	.52							1.74			792	838
N3941	10.99	.11	14.3	10.67	.07							1.01	1.55		1 2 11	46
	11.4			.19											956	969
	11.26		13.6												0 2 40	13
A1150-04				.22												-169
A1150+70				.29											9534	9694
72426															0 1 220	160
N3945	12.1	11.5	12.5	.24	0.92	*	0.94	0.53	.83						1220	1340
N3947	11.36	.2	14.6	11.13	.05		.05	.06							0 1 75	120
N3949	11.6	11.4		.21	.44				.35							-62
	11.79	.15	13.1	11.02	.06										681	745
															0 1 150	64
A1151+46		15.9		.20	.77	-.22									7185	7241
N3952	13.0	.15		.22	.06	.07									0 1 95	56
N3953	13.46		13.4						.59							-167
	11.5	10.75		.22	0.70	*									959	1043
12974	10.96	.09	14.0	10.32	.04										0 2 42	84
				.22												-171
A1151+09		*		.19	*	*										-112
N3955	12.8	12.55	12.3	.29	0.65	0.05	0.65	0.03	.51						1345*	1118
N3956	12.65	.09	13.9	11.97	.04	.1	.02	.1	-.04						0 2 58	-227
	12.6			.28												-220
N3957	12.54		14.0													-217
	12.9			.27												111
N3958	12.65		13.7	.24												1622
N3962															0 2 27	-200
	12.2	11.55		.25	0.96	*	*	*	.89							
	11.83	.13	13.7	11.27	.05											

NGC IC, A MK, DDO (1)	Coordinates				Classification							Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D) Log Do (13)	Log Ae m.e. (14)		
N3963	11 52.38	58 46.3	136.51	56.9	.SXT4..	4	W060V	S AF		1.45	.04	1.44			
A1152+06	5.23	-33.3	57.12	5.8	S 5	2	3.2		4 S	.033	.027	1.46			
A1152+51	5.21	-33.3	65.14	-12.6	.SB53..	3	P048N			1.17	.14	1.13			
MK192	11 52.73	51 24.3	143.06	63.8			1.8			.039	.038	1.15			
A1152+57	5.21	-33.3	63.75	3.2											
MK193	11 52.87	57 56.4	137.03	57.7											
N3968	5.22	-33.3	57.91	5.5											
	11 52.9	12 15	259.32	100.6	.SXT4..	4	P048N			1.47	.13	1.43			
	5.16	-33.3	69.95	-10.7			2.4			.039	.038	1.45			
A1152+558	11 52.9	55 9	139.31	60.4	.S..05.	05	P048C			.79	.25	.74			
A1152+55A	5.21	-33.3	60.44	4.5			1.2			.075	.100	.77			
	11 53.0	55 33.3	139.26	60.3	.LA..P*	-2	P048C			.79	.25	.74			
	5.21	-33.3	60.42	4.6			1.2			.075	.100	.77			
A1153+31	11 53.07	31 47.7	189.76	82.1	.I..9..	10	P048F			1.32	.19	1.27			
D101	5.18	-33.3	77.08	-3.9		9	2.0			.046	.045	1.28			
N3972	11 53.18	55 36.0	138.85	60.0	.SAS4..	4	W060V	S AF	3 S	1.60	.48	1.49			
	5.21	-33.3	60.05	4.7			3.1			.032	.026	1.51			
N3975	11 53.29	60 48.5	134.91	55.1	.SA.35.	3	P048C			.92	.25	.86			
	5.22	-33.3	55.29	6.6			1.1			.037	.034	.88			
N3976	11 53.39	7 1.7	267.54	105.7	.SXS3..	3	W060V	S *G		1.59	.44	1.49			
	5.16	-33.3	65.73	-12.2	S 3	3	3.1		03 S	.032	.026	1.51			
N3981	11 53.54	-19 37.0	285.58	132.6	.SAT4..	4	P200C			1.59	.41	1.49			
	5.14	-33.3	41.10	-18.8	S 3 T		3.9	S F		.043	.035	1.51			
N3977	11 53.54	55 40.2	138.70	59.9	RSAT2..	2*	W060V		4 S	1.24	.23	1.23			
	5.21	-33.3	60.01	4.8			2.6			.126	.03	1.25			
N3978	11 53.56	60 48.0	134.86	55.1	.SX.45.	4	P048C			.037	.033	1.28			
	5.22	-33.3	55.31	6.6			2.1			1.40	.05	1.39			
N3982	11 53.88	55 24.3	138.83	60.2	.SXR3..	3*	W060V	S F	4 S	.034	.029	1.41			
	5.20	-33.3	60.27	4.8	S 3 N		3.1	S P G *							
A1154+55	11 54.0	55 54	138.38	59.7	.S..8*	8*	P048N			1.19	.48	1.08			
	5.20	-33.3	59.83	5.0			1.5			.039	.038	1.09			
N3985	11 54.12	48 36.8	145.95	66.5	.SB59..	9	W060V	SIP *G *		1.09	.17	1.06			
	5.19	-33.3	66.28	2.4	S *		2.4	ISP	1	.035	.031	1.07			
N3986	11 54.16	32 18.0	187.29	81.8	.L....-/	-2	W100V			1.49	.60	1.35			
	5.17	-33.3	77.15	-3.5			3.2		3 S	.038	.032	1.38			
N3987	11 54.7	25 29	218.89	88.2	.S..3..	3	P048N			1.39	.65	1.24			
	5.17	-33.3	77.70	-5.8			1.7			.039	.038	1.25			
A1154+49	11 54.7	49 33	144.57	65.7	.SXS7..	7	P048N			1.63	.15	1.60			
	5.18	-33.3	65.52	2.8			2.7			.046	.045	1.61			
N3991	11 54.93	32 36.8	185.71	81.5	.I..9P/	10	W100V	I A		1.16	.50	1.04			
	5.17	-33.3	77.20	-3.3			2.6			.035	.031	1.05			
N3992	11 55.01	53 39.3	140.10	61.9	.SBT4..	4	P200V	R F	3	1.88	.19	1.83	1.55		
	5.18	-33.3	61.92	4.3	SX4	1	5.0		04	.028	.021	.05			
N3990	11 55.02	55 44.3	138.26	59.9	.L..-*/	-3*	W060V	D *K	4 S	1.23	.23	1.18			
	5.19	-33.3	60.04	5.0			3			.039	.034	1.21			
N3994	11 55.03	32 33.3	185.93	81.6	.SAR5P5	5	W100V	SI *AF	3 S	1.05	.22	1.00			
	5.17	-33.3	77.24	-3.3			2.7			.035	.031	1.02			
N3993	11 55.06	25 31.2	218.80	88.2	.S..3*/	3*	P048C			1.27	.50	1.15			
	5.16	-33.3	77.79	-5.8			1.6			.036	.032	1.17			
N3995	11 55.16	32 34.3	185.81	81.6	.SA.9P.	9	W100V	IS *AF	5	1.44	.38	1.35			
	5.17	-33.3	77.26	-3.2	S 5 T		3.3	ISP *A *	3 S	.032	.026	1.36			
N3997	11 55.23	25 33.0	216.70	88.2	.SB.3P.	3	P048C			1.26	.27	1.20			
	5.16	-33.3	77.83	-5.7			1.8			.036	.033	1.22			
N3998	11 55.33	55 44.1	138.18	59.9	.LAR05.	-2	W060V	D K	3	1.49	.09	1.47	0.80		
	5.18	-33.3	60.06	5.1	E 2P *		3.3	D K	4	.053	.036	1.50	.04		
N4004	11 55.52	28 9.3	206.25	85.7	.P.....		P048N			1.35	.46	1.24			
MK432	5.16	-33.3	78.15	-4.7			1.8			.039	.038	1.26			
N4008	11 55.71	28 28.2	204.70	85.5	.E.5..	-5	W100V	E4 K	3 S	1.40	.23	1.35			
	5.16	-33.3	78.19	-4.6	S.0		3.4	D K		.058	.040	1.38			
A1155-14A	11 55.73	-14 27.3	284.21	127.4	.I..9..	10	P048N			1.13	.37	1.04			
D104	5.15	-33.3	46.20	-17.3		9*	1.5			.046	.045	1.05			
A1155-14B	11 55.85	-14 14.8	284.16	127.2	.S...P.	85	P048N			1.08	.04	1.07			
D103	5.15	-33.3	46.40	-17.2			1.7			.039	.038	1.09			
A1155-51	11 55.85	51 11.7	142.31	64.2	.SB53..	9	P048C			1.36	.08	1.34			
D102	5.17	-33.3	64.17	3.5	S5	9	2.2			.052	.050	1.35			
A1155-22	11 55.87	-22 9.9	287.16	135.3	.I..9..	10	P048N			1.40	.17	1.36			
D106	5.15	-33.3	38.80	-18.7	I	9	2.2			.046	.045	1.37			
A1155+38	11 55.93	38 21.3	165.04	76.2	.SB59..	9	P048C			1.68	.26	1.62			
D105	5.16	-33.3	74.41	-1.0	I	9	2.7			.039	.038	1.63			
N4013	11 55.96	44 13.7	151.86	70.7	.S..3./	3	W100V	S *GK*		1.72	.62	1.57			
	5.17	-33.3	77.26	-3.2	S 5 T		3.6	S *GK*	1	.030	.024	1.59			
N4024	11 55.97	-18 4.2	285.74	131.1	.LX...-	-3	W060V			1.37	.15	1.33			
	5.15	-33.3	42.75	-17.9	E 2		3.0	DB *K *	3 S	.061	.046	1.37			
I0749	11 55.99	43 0.8	154.09	71.9	.SBT5..	5	P048C			1.40	.07	1.38			
	5.17	-33.3	71.05	.6	S 5 K -	5*	2.3			.037	.035	1.40			
N4010	11 56.05	47 32.4	146.68	67.7	.SB56*/	6	P048C			1.62	.63	1.47			
	5.17	-33.3	67.36	2.3			2.2			.034	.029	1.49			
A1156+53	11 56.1	53 42	139.75	61.9	.I..9..	10	P048N			1.24	.45	1.14			
	5.17	-33.3	61.95	4.5			1.6			.039	.038	1.15			
I0750	11 56.29	43 0.1	153.98	71.9	.S..2*/	2*	P048C			1.46	.32	1.38			
	5.16	-33.3	71.10	.7	S 2 N *		2.2	I P *		.037	.035	1.40			
I0751	11 56.30	42 51.0	154.27	72.1	.S..35/	35	P048C			1.17	.50	1.05			
	5.16	-33.3	71.21	.6			1.4			.039	.038	1.07			
N4020	11 56.37	30 41.2	193.92	83.4	.SB.75/	7	P048C			1.33	.30	1.26			
	5.16	-33.3	78.05	-3.7			1.9			.035	.031	1.27			
N4025	11 56.59	38 4.3	165.53	76.5	.SB56..	6	P048C			1.52	.22	1.47			
D107	5.16	-33.3	74.69	-1.0	SX	7*	2.4			.037	.036	1.48			
A1156+52	11 56.6	52 59	140.27	62.6	.SBT6..	6	P048N			1.58	.13	1.55			
	5.16	-33.3	62.63	4.3			2.6			.039	.038	1.57			
N4026	11 56.84	51 14.4	141.95	64.2	.L....-/	-2	W060V	D K	3	1.71	.56	1.58			
	5.16	-33.3	64.20	3.7	E 8		3.2	D K	4VS	.036	.030	1.61			
N4027	11 56.94	-18 59.4	286.38	132.1	.SB58..	8	W100V	ISP *AF		1.47	.10	1.45	1.05		
	5.15	-33.3	41.93	-17.9	S 5 T		3.6	SIP *AF*		.025	.022	1.47	.03		
N4030	11 57.83	-0 49.4	277.38	113.8	.SAS4..	4	W060V	S F	2	1.63	.12	1.60			
	5.15	-33.3	59.21	-13.4	S 5	1	3.5		3 S	.027	.021	1.62			
N4035	11 57.93	-15 40.2	285.44	128.7	.SXT4..	4	P048C			1.13	.01	1.13			
	5.15	-33.3	45.18	-17.0			1.8			.058	.051	1.15			
N4032	11 57.99	20 21.1	241.44	93.3	.I..9..	10	P048C			1.32	.12	1.32			
	5.15	-33.3	76.39	-6.9	I	5*	2.2	I P G *		.036	.033	1.33			

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _L N _H N _T (24)	α _L α _L (25)	Log S _H N _L A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N3963	12.7			.24										3204	3316	P
A1152+06	12.38		14.4	.20										0 1 40	112	
A1152+51				.21										6973	6847	
A1152+57				.23										0 1 25	-126	
N3968				.19										3594	3673	
														0 1 220	79	
														5203	5311	
														0 2 52	108	
A1152+558		16.3		.23	1.09	.04									-101	P
A1152+55A		.15	14.5	.23	.06	.07									96	
A1153+31		15.60	13.8	.19	1.16	0.35	*	*							96	
N3972		.09		.23	.04	.1								552	541	
N3975				.24										1 0 100	-11	
															98	
															120	
N3976	12.4			.20											-123	P
N3981	12.24		13.9	.27												P
V 8	12.7			.23											-217	S
N3977	12.44		14.2	.24										5735	5833	
N3978				.23										0 1 105	98	
N3982	11.8			.23											121	
	11.91		13.6	.23											97	
A1154+55				.23											100	
N3985	12.9			.21											67	
N3986	13.02		12.9	.19											-8	
N3987				.18											-40	
A1154+49				.21											72	
N3991		13.55		.19	0.37	-.3	*	*	.18					3328	3322	P
N3992	11.2	.09	12.9	12.86	.03	.1			-.43					0 2 23	-6	
	10.57	10.60	13.8	.22	0.79		0.88	0.44	.70			1.55	2.47	1059	1149	PST
N3990		.09	14.4	10.22	.05		.04	.05				1.01		0 1 100	90	
N3994		13.40		.23	0.85	0.38	*	*	.78					720	819	
V249		.09	13.8	13.11	.05	.06			.33					0 1 43	99	
N3993		13.35		.19	0.61	-.13	*	*	.50					3142	3136	P
		.09	12.9	12.97	.04	.04			-.21					0 1 95	-6	
				.18										4862	4823	
														0 1 95	-39	
N3995	12.9	12.8		.19	0.25	-.37	*	*	.10					3387	3381	P
N3997	12.76	.1	13.9	12.26	.03	.04			-.48					0 3 17	-6	
V249				.18										4799	4760	
N3998	11.6	11.55	11.0	.23	0.94	0.51	0.98	0.56	.87	.95*	.295		2.955	0 1 95	-39	
N4004	11.52	.07	13.6	11.27	.03	.03	.02	.03	.46	1 1 6	.005			1138	1237	
V230				.18										0 5 16	99	
N4008	12.9	12.9		.18	.90	.23								3410	3383	
	12.51	.15	14.3		.06	.07								0 2 71	-27	
A1155-14A				.25											-25	
A1155-14B				.25											-201	
A1155+51				.21											-200	
A1155-22				.29								.77		913	992	
A1155+38				.19								1.01		1 0 10	79	
												.85		1785	1562	
												1.01		1 0 10	-223	
												1.23		918	938	
												1.01		1 0 10	20	
N4013	12.7*			.20												P
N4024	12.00		13.9	.27											48	
I0749	12.9			.20											-212	
N4010	12.62	12.80	14.0	.20	0.58	-.02	*	*							42	
	12.86	.09	14.5	.21	.04	.04									63	
A1156+53				.22											91	
I0750	13.0	12.80		.20	0.98	0.39	*	*							42	
I0751	12.84	.09	14.1	.20	.04	.05									41	
N4020				.19											-14	
N4025				.19											19	
A1156+52				.22											88	S
N4026	12.0	11.7		.21										878	958	P
N4027	11.63	.15	13.7	11.25										0 1 75	80	
V 66	11.6	11.65	12.4	.27	0.55	-.08	0.55	-.07	.46	1.045	.455		2.705	0 1 75	1677	P
N4030	11.55	.08	13.6	11.30	.03	.03	.02	.02	-.15	1 0 2	.455			0 3 10	-214	
	11.2	*		.21	*	*				1.30	.48			1407	1255	
N4035	11.07		13.8	.26						3 1 4	1.05			0 1 61	-152	
N4032	13.0			.18											-203	
	12.76		14.2												-62	

NGC IC, A MK, DDO (1)	Coordinates				Classification						Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log D ₀ (12)	Log Ae m.e. (13)	
N4033	11 58.02 5.16	-17 33.9 -33.3	286.19 43.37	130.7 -17.4	F.6... E 5	-5	W100V 3.2	D K	4 5	1.40 .100	.36 .051	1.32 1.36		
10755	11 58.6 5.15	14 23 -33.3	258.44 72.48	99.0 -8.7	.SB.3S/ 7	3*	P048C 1.8			1.43 .039	.61 .058	1.28 1.30		
N4037	11 58.83 5.15	13 40.8 -33.3	260.04 71.97	99.7 -8.9	.SBT3*. SA	3S 7*	W060V 3.2	S F	3VS	1.43 .039	.06 .032	1.41 1.43		
N4036	11 58.89 5.13	62 10.5 -33.3	132.99 54.25	54.0 7.7	.L...-... E 6	-3	W060V 3.3	SD *K	4	1.65 .051	.34 .030	1.57 1.61	1.10 .07	
A1159+62	11 59.2 5.12	62 37 -33.3	132.68 53.84	53.6 7.9	.T...9... 1	10	P048N 1.6			1.24 .039	.45 .038	1.14 1.15		
N4038	11 59.32 5.16	-18 35.1 -33.3	286.96 42.46	131.8 -17.3	.SBS9P. S 5 T	9	M082V 3.3	I P AF* I P A *	4	1.41 .071	.16 .071	1.37 1.39		
N4038.	11 59.33 5.16	-18 35.7 -33.3	286.97 42.46	131.8 -17.3	.P..... 1	9	M082V 4.2			1.88 .047	.19 .024	1.84 1.86		
N4039	11 59.34 5.16	-18 36.4 -33.3	286.98 42.45	131.8 -17.3	.SAS9P. 1	9	M082V 3.5		4	1.51 .071	.16 .071	1.47 1.49		
N4041	11 59.65 5.11	62 25.0 -33.3	132.71 54.05	53.8 7.8	.SAT4*. S 5 K -	4 3	W060V P048C	S G		1.45 .032	.02 .025	1.44 1.46	1.05 .05	
A1200+41	12 0 5.13	41 20 -33.3	155.66 72.82	73.7 .7	.SAT4*. 1	4	P048N 2.2			1.35 .039	.05 .038	1.36 1.36		
A1200+64 MK195	12 0.05 5.10	64 39.3 -33.3	131.47 51.94	51.7 8.6	.L...S. 1	-2S	P048N 1.7			1.18 .042	.27 .045	1.11 1.14		
N4045	12 0.15 5.15	2 15.5 -33.3	275.99 62.27	110.9 -12.0	.SXR1.. S PT	1	W060V 3.1	S F	4VS	1.44 .035	.13 .031	1.41 1.43	1.00 .03	
N4045A	12 0.2 5.15	2 15.5 -33.3	276.03 62.26	110.9 -12.0	.LB... 1	-1*	P048C 1.1			.84 .042	.41 .045	.75 .78		
N4047	12 0.30 5.12	48 54.9 -33.3	143.36 66.52	66.6 3.4	RSAT3*. S 4	3* 5*	W060V 2.7	SD *G S P*	4VS	1.18 .035	.06 .031	1.16 1.18		
N4050	12 0.34 5.16	-16 5.6 -33.3	286.39 44.93	129.3 -16.5	.SBR2.. SX2	2 3*	W100V 3.6	SR *F	4VS	1.49 .043	.14 .032	1.46 1.49		
A1200+39 MK 43	12 0.44 5.13	39 42.2 -33.3	159.22 74.10	75.3 .3										
N4051	12 0.61 5.12	44 48.7 -33.3	148.89 70.08	70.5 2.1	.SXT4.. S 5 K -	4 3	W100V 4.1	S F * S F	5 5VS	1.70 .030	.10 .023	1.68 1.70	1.36 .02	
A1200+16	12 0.8 5.14	16 47 -33.3	254.14 74.61	96.9 -7.4						.77 .042	.04 .045	.76		
12987 MK 44	12 0.85 5.13	39 5.5 -33.3	160.57 74.60	75.9 -1										
A1201+60 MK 45	12 1.03 5.09	60 48.5 -33.3	133.35 55.62	55.4 7.5						.90 .075	.42 .100	.80		
A1201+01	12 1.2 5.15	1 59 -33.3	276.74 62.13	111.3 -11.8						1.16 .075	.39 .100	1.06		
A1201+29	12 1.3 5.13	29 59 -33.3	196.31 79.23	84.5 -2.9	.S...6*. 1	6*	P048N 1.0			1.16 .050	.87 .050	.96 .97		
N4068	12 1.47 5.10	52 52.0 -33.3	138.92 63.04	62.9 4.9	.I...9... 1	10	P048C 2.3			1.50 .038	.25 .037	1.44 1.45		
N4061	12 1.5 5.14	20 30 -33.3	242.93 77.15	93.4 -6.1	.E...3*. 1	-5*	P048N 1.8			1.17 .071	.12 .071	1.14 1.17		
N4062	12 1.51 5.13	32 10.6 -33.3	185.26 78.65	82.4 -2.1	.SAS5.. S 3	5 3*	W100V 3.7	S AF	3VS	1.63 .030	.33 .023	1.55 1.57		
N4065	12 1.6 5.14	20 30 -33.3	242.99 77.17	93.4 -6.0	.E...1... 1	-5	P048N 1.9			1.17 .051	.02 .058	1.16 1.19		
N4067	12 1.63 5.15	11 8.0 -33.3	266.34 70.29	102.4 -9.0	.SAS3S. 1	3	P048C 1.8			1.18 .037	.13 .034	1.15 1.17		
N4064	12 1.63 5.14	18 43.3 -33.3	249.08 76.09	95.1 -6.6	.SBS1*P S 2	1*	W100V 5	SI *AF* S *AF	3	1.65 .036	.36 .028	1.57 1.59		
10758	12 1.67 5.08	62 47.0 -33.3	132.14 53.77	53.5 8.2	.SBT6*. 1	6	P048C 1.7							
A1201+01 0108	12 1.78 5.15	-1 15.1 -33.3	279.48 59.18	114.5 -12.6	.I...9... 1	10 9	P048N 1.8			1.14 .052	.02 .050	1.13 1.14		
N4073	12 1.89 5.15	2 10.5 -33.3	276.92 62.37	111.1 -11.6	.LA...-.. E 1	-3	P048C 2.2			1.39 .067	.11 .062	1.36 1.39		
N4081	12 2.03 5.06	64 42.9 -33.3	131.11 51.94	51.7 8.8	.S...1S. 1	1S	P048C 1.7			1.25 .039	.35 .038	1.17 1.20		
A1202+27 0240	12 2.12 5.18	-27 50.4 -33.3	290.55 33.63	141.5 -18.2	.S...9... 1	9 9	P048N 2.2			1.34 .052	.07 .050	1.32 1.34		
N4079	12 2.27 5.16	-2 6.3 -33.3	280.28 58.42	115.4 -12.7	.SAT4*. 1	4	P048C 2.2			1.38 .036	.13 .035	1.35 1.37		
A1202+18A	12 2.8 5.14	18 9 -33.3	251.61 75.91	95.8 -6.5	.SBT4*. 1	4	P048C 1.7			1.11 .039	.13 .038	1.08 1.10		
A1202+18B	12 2.8 5.14	18 12 -33.3	251.46 75.94	95.7 -6.5	.S...1... 1	1	P048C 1.3			1.10 .039	.43 .038	1.00 1.02		
N4085	12 2.84 5.09	50 37.9 -33.3	140.59 65.17	65.1 4.4	.SXS5S S 3	5 5*	W060V 2.8	IS *A B *A *	1	1.45 .030	.48 .022	1.34 1.36		
N4088	12 3.05 5.09	50 49.2 -33.3	140.33 65.01	65.0 4.5	.SXT4.. S 5 K	4 2*	W060V 3.5	S P A *	3VS	1.76 .028	.36 .020	1.67 1.69	1.30 .04	
A1203+09	12 3.2 5.14	9 16 -33.3	270.05 68.89	104.3 -9.2	.S...P. 1		P048N 1.7			1.29 .071	.45 .071	1.18 1.20		
12995	12 3.21 5.18	-27 39.7 -33.3	290.79 33.85	141.3 -17.9	.SBS5*. S	5* 7*	W100V 3.4		1	1.49 .031	.42 .025	1.39 1.42		
A1203+31B	12 3.21 5.12	31 20.3 -33.3	188.72 79.28	83.3 -2.1	.LAR-P. 1	-3	P200C 3.6			1.44 .075	.37 .100	1.35 1.38		
A1203+31A	12 3.21 5.12	31 21.5 -33.3	188.62 79.28	83.3 -2.1	.LX.0*P 1	-2	P200C 2.2			.60 .075	.14 .100	.57 .60		
N4094	12 3.33 5.17	-14 14.9 -33.3	286.70 46.90	127.6 -15.4	.SAT5*. S 6	5 7	P048C 2.4	S AF		1.62 .034	.37 .029	1.53 1.55		
N4108A	12 3.36 5.02	67 32.0 -33.3	129.66 49.27	49.0 9.8	.SX.4*. 1	4	P048C 1.6			1.21 .039	.37 .038	1.12 1.14		
N4096	12 3.49 5.09	47 45.4 -33.2	143.55 67.79	67.9 3.5	.SXT5.. S 5 K	5 3*	W060V 3.5	S AF S AF	3 S	1.81 .029	.50 .021	1.69 1.71		
N4100	12 3.62 5.08	49 51.6 -33.2	141.11 65.92	65.9 4.2	PSAT4.. S 3 N	4 2*	W060V 3.4	S AF S P FG*	3VS	1.72 .030	.43 .024	1.62 1.64		
N4102	12 3.86 5.07	52 59.3 -33.2	138.09 63.07	63.0 5.3	.SXS3S. S 5 KT	3S 2	W060V 3.2	S P G DSP K *	5 3 S	1.50 .033	.21 .027	1.45 1.47		
N4104	12 4.1 5.12	28 27 -33.2	204.35 80.03	86.1 -2.9	.L..... 1	-2	P048N 2.3			1.47 .071	.23 .071	1.41 1.43		
N4105	12 4.10 5.19	-29 28.9 -33.2	291.47 32.11	143.2 -18.0	.E...3... 1	-5	W100V 3.5			.11 .085	.11 .043	1.35 1.40		
N4106	12 4.18 5.19	-29 29.4 -33.2	291.49 32.11	143.3 -18.0	.LBS... E 0 T	-1	W100V 3.3		3 4	1.29 .095	.10 .047	1.27 1.31	0.75 .07	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)	
N4033	12.8			.26											-209	P
I0755	12.40			.19											-88	
N4037	12.8			.19											-91	T
N4036	12.52			.25	0.90	0.55	0.96	0.59	.81					1382	1510	
A1159+62	11.9	11.40	12.4	.25	.03	.06	.05	.06	.49					0 1 50	128	
	11.47	.09	13.7	.25											130	
N4038		11.3		.27	.60	.22			.49					1658	1447	PS
V245		.15	12.8	10.88	.06	.07			-.30					1 4 8	-211	
N4038.	11.0			.27						1.78	.84	1.21				P
	10.61		14.4	.27	*	*				5 4 7	.82	1 .01				
N4039		*		.27	*	*								1641	1430	T
V245				.25	0.54	.10	0.64	-.01	.47					0 4 9	-211	
N4041	12.0	11.7	12.4	.25	.04	.05	.06	.05	-.15					0 1 34	1320	
A1200+41	11.90	.1	13.7	11.43	.20									0 1 34	129	
				.20										6131	6167	S
														1 1 9	36	
				.26	*	*								1447	1585	
A1200+64		*		.26	*	*								0 3 28	138	
N4045	12.8	12.65	13.1	.21	0.81	0.25	0.88	0.27								S
N4045A	12.56	.07	14.4	.21	.02	.03	.02	.02							-138	
N4047	12.8			.21											-138	
N4050	13.10			.26	*	*									71	
	12.5	*		.26	*	*									-203	PT
	12.25		14.2													
A1200+39				.19										6132	6161	
				.20	0.67	0.00	0.71	0.05	.60					0 1 105	29	
N4051	11.7*	10.95	13.2	.20	.03	.04	.02	.02	-.05			1.44		674	726	S
A1200+16	10.90	.05	14.0	10.67								2 .01	2.30	2 4 10	52	
				.19												
I2987		*		.19	*	*								6928	6954	
A1201+60				.24										0 1 105	26	S
														4209	4332	
														0 1 105	123	
A1201+01				.21											-139	PT
A1201+29				.19											-15	
N4068				.22											89	
N4061				.18											-59	
V179				.19	.76	.06			.65					748	743	PT
N4062	12.1	12.0	14.2	11.54	.06	.07			-.03					0 1 150	-5	
	11.88	.15														
N4065				.18											-59	
V179				.19											-100	PT
N4067				.19											959	
N4064	12.8	12.2	14.4	.19	.83	.17			.71					1026	-67	
I0758	12.28	.15		11.71	.06	.07			.07					0 1 60		
				.25											131	P
A1201-01				.21								.70		1464	1313	
												1 .01		1 0 15	-151	
N4073	13.2			.21											-138	P
N4081	12.74		14.3	.26											139	
				.32								.33		1741	1508	
A1202-27				.22								1 .01		1 0 70	-233	
N4079				.22											-154	P
A1202+18A				.19											-69	
A1202+18B				.19											-69	
N4085	12.8	12.91		.21	.59										79	PT
	12.89	.11	13.8		.07										822	
N4088	11.2	11.10	13.1	.21	0.60	*	0.68	0.06	.48	1.48	.835		2.31	742	80	
A1203+09	11.02	.09	13.8	10.60	.05		.04	.04		1 3 1	1.67			0 2 60	-108	
I2995	12.7			.32											-232	P
	12.68		13.9													
				.19										6894	6886	
A1203+31B				.19										0 1 24	-8	
A1203+31A				.25										7010	7002	P
V 13				.25										0 1 23	-8	
N4094	13.0			.27											-196	
N4108A	12.54		14.6													
N4096	12.2	11.02	13.7	10.41	0.44				.29			1.30		494	150	ST
	11.69	.11		.21	.07							1 .03	2.85	1 1 27	67	
N4100	11.9			.21											76	
N4102	11.62		14.0	.22										896	986	
N4104	12.1	12.3	14.1	11.91										0 2 39	90	S
	12.05	.15		.18										8493	8472	
N4105	12.0	*		.33	*									0 1 150	-21	
			13.6											1895	1659	
N4106	11.94			.33					.89					0 1 50	-236	S
	12.5	12.35	11.6	.33	1.00	*	1.04	0.52						2178	1942	
	12.58	.13	13.4	11.93	.05		.04	.06						0 1 50	-236	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D(0) Log D ₀ (13)	Log A _e m.e. (14)
N4108	12 4.27	67 26.6	129.57	49.1	PSA.5*	5	P048C			1.28	.07	1.27	
N4109	5.00	-33.2	49.38	9.9			2.1			.038	.036	1.29	
N4111	12 4.32	43 16.4	149.76	72.2	.S...15.	15	P048C			.92	.06	1.91	
	5.09	-33.2	71.74	2.2			1.4			.037	.035	.93	
A1204+17	12 4.53	43 20.7	149.53	72.1	.LAR.*/*	-1*	W100V	O K	3	1.68	.63	1.53	0.63
	5.09	-33.2	71.70	2.2	E 8		3.5	O K	4VS	.033	.022	1.56	.04
	12 4.60	17 16.5	255.36	96.7	.SB.35.	3	P048C			.83	.00	.83	
N4114	5.13	-33.2	75.60	-6.4			1.2			.050	.050	.85	
	12 4.63	-13 54.4	287.02	127.3	PSXS1*	1	P048C			1.36	.33	1.28	
	5.17	-33.2	47.31	-15.0			2.0			.056	.048	1.31	
N4108B	12 4.72	67 30.9	129.48	49.1	.SXS7P*	7	P048C			1.19	.07	1.17	
	4.99	-33.2	49.33	9.9			1.9			.039	.038	1.19	
A1204+40	12 4.85	40 5.4	155.93	75.2	.I..9..	10	P048F			1.13	.06	1.12	
D109	5.09	-33.2	74.37	1.2	I	9	1.8			.100	.100	1.13	
N4116	12 5.06	2 56.2	277.85	110.6	.SBT8..	8	W060V	B AF	12	1.58	.20	1.53	
	5.15	-33.2	63.41	-10.6	SB5	5*	3.3			.031	.023	1.54	
N4117	12 5.24	43 24.3	149.08	72.1	.L...*	-3*	P048C	B *F *	3VS	1.45	.42	1.35	
	5.08	-33.2	71.72	2.4			2.1			.071	.071	1.38	
A1205+67	12 5.30	67 39.8	129.34	48.9						.83	.00	.83	
MK197	4.97	-33.2	49.20	10.0						.050	.050		
N4118	12 5.35	43 23.5	149.05	72.1	.L...*	-15	P048C			.93	.26	.87	
	5.08	-33.2	71.74	2.4			1.2			.042	.045	.90	
N4121	12 5.44	65 23.7	130.25	51.1	.E.2...	-5	W060V		3	.75	.06	.74	
	4.99	-33.2	51.39	9.4			1.8			.050	.050	.78	
N4125	12 5.58	65 27.3	130.20	51.1	.E.6.P.	-5	W060V	E5 K	3	1.71	.20	1.67	
	4.98	-33.2	51.34	9.4	E 5P		3.6			.052	.034	1.71	
N4124	12 5.60	10 39.5	269.55	103.2	.LAR...*	-1	W100V	D *FG		1.66	.42	1.56	
	5.14	-33.2	70.39	-8.2	S 0*		3.7	D G	4VS	.047	.029	1.58	
N4123	12 5.63	3 9.4	277.99	110.6	.SBR5..	5	W060V	B AF	4	1.65	.11	1.62	
	5.15	-33.2	63.64	-10.5	SB3	5	3.6	B *F *	4VS	.030	.022	1.64	
N4127	12 6.0	77 5	126.13	39.7	.SA.45.	4*	P048C			1.37	.26	1.31	
	4.81	-33.2	40.06	12.7			2.1			.039	.038	1.34	
N4120	12 6.06	69 49.4	128.43	46.8	.SAT5*	5	P048C			1.29	.55	1.16	
	4.93	-33.2	47.12	10.7			1.9			.038	.035	1.18	
N4128	12 6.07	69 2.8	128.71	47.6	.LA...*	-2	W060V	DB *K		1.44	.24	1.34	
	4.94	-33.2	47.88	10.5	S 0*		2.8			.037	.029	1.38	
N4131	12 6.2	29 35	197.42	85.2	.S.....		P048N		4 S	1.20	.27	1.14	
	5.11	-33.2	80.35	-2.1			1.7			.039	.038	1.16	
N4129	12 6.32	-8 45.5	285.56	122.2	.SBS2*/	2*	W100V			1.41	.52	1.29	
	5.17	-33.2	52.39	-13.4	S *		3.1	DSP*G *		.044	.033	1.31	
N4132	12 6.5	29 31	197.74	85.3	.S.....		P048N			1.06	.39	.96	
	5.10	-33.2	80.43	-2.0			1.3			.039	.038	.98	
N4135	12 6.63	44 16.9	146.98	71.3	.SXS65.	4	P048C			1.00	.11	.97	
	5.07	-33.2	71.10	2.9			1.5			.058	.052	.99	
A1206+47	12 6.72	47 20.1	142.76	68.5	RLX.OP.	-2	PG48C			.87	.00	.87	0.35
MK198	5.06	-33.2	68.41	3.9			1.6			.075	.100	.90	.05
N4136	12 6.76	30 12.3	193.64	84.6	.SARS..	5	P048C		4	1.61	.02	1.61	
	5.10	-33.2	80.39	-1.7	S 5 N -	5	3.7	S F	4 S	.033	.028	1.63	
N4137	12 6.78	44 22.2	146.77	71.3	.SBS5..	5	P048C			1.09	.14	1.06	
	5.07	-33.2	71.04	2.9			1.6			.038	.037	1.08	
N4138	12 6.98	43 57.8	147.31	71.7	.LAR...*	-1	W060V	SD *G	3	1.46	.19	1.42	
	5.07	-33.2	71.40	2.8	E 4		3.1	D K	3 S	.059	.043	1.45	
A1207+17	12 7.0	17 17	257.05	96.9						1.19	.04	1.18	
	5.12	-33.2	75.99	-5.9			.075			.100			
N4142	12 7.01	53 22.9	136.80	62.7	.SBS7*	7	P048C			1.36	.24	1.31	
	5.03	-33.2	62.88	5.9			2.1			.038	.036	1.33	
N4143	12 7.08	42 48.8	149.19	72.8	.LXS0..	-2	W100V	DB *K	3	1.46	.20	1.42	
	5.07	-33.2	72.40	2.5	E 4		3.5	DE K	03 S	.057	.040	1.45	
A1207+42	12 7.1	42 36	149.56	73.0									
	5.07	-33.2	72.58	2.4									
N4144	12 7.47	46 46.1	143.18	69.1	.SXS65/	6*	W060V	SI *AF		1.77	.58	1.63	
	5.05	-33.2	69.01	3.8	S 3	5	3.3	S *FG*	1	.032	.026	1.65	
N4145	12 7.50	40 9.6	154.28	75.3	.SXT7..	7	...V			1.76	.12	1.73	1.47
	5.07	-33.2	74.62	1.7	S 5K	3	5.0	S F		.030	.024	1.74	.04
N4148	12 7.6	36 9	165.53	79.1	.L.....	-1	P048N			1.26	.20	1.21	
	5.08	-33.2	77.61	.4			1.9			.051	.058	1.23	
I0764	12 7.65	-29 27.5	292.36	143.3	.SASS5..	55	W100V			1.68	.42	1.59	
	5.21	-33.2	82.29	-17.2	S	3*	3.7		2	.032	.027	1.62	
N4146	12 7.77	26 42.5	214.96	88.0	RSBS2*	2	P048C			1.20	.03	1.19	
	5.10	-33.2	80.80	-2.7			1.9			.038	.036	1.21	
N4151	12 8.00	39 40.9	155.10	75.8	PSXT2*	2*	W100V	S P GK	5	1.77	.13	1.74	1.1
	5.07	-33.2	75.06	1.6	P		4.2	DSP G	5 S	.032	.026	1.76	.1
N4150	12 8.02	30 40.9	190.44	84.3	.LAR05.	-2	W100V			1.39	.14	1.36	
	5.09	-33.2	80.47	-1.3	E 2		3.4	n GK	4VS	.060	.043	1.39	
A1208+70	12 8.07	70 38.8	127.90	46.1	.P...5.		P048N			1.13	.64	.98	
MK199	4.87	-33.2	46.36	11.1			1.2			.050	.050	1.01	
N4152	12 8.08	16 18.7	260.40	97.9	.SXT5..	5	W100V	S F		1.37	.09	1.35	0.90
	5.12	-33.2	75.42	-5.9	S 5 N -*	4*	3.5	SD FG	3 S	.033	.028	1.37	.04
N4156	12 8.29	39 44.9	154.77	75.7	.SRT3..	3	W100V			1.19	.07	1.17	0.80
	5.07	-33.2	75.04	1.7			3.1		3 S	.033	.028	1.19	.03
A1208+40	12 8.4	40 2	154.05	75.5	.S..8*	8*	P048N			1.31	.54	1.18	
	5.07	-33.2	74.83	1.8			1.7			.039	.038	1.19	
A1208+50	12 8.42	50 33.9	138.71	65.5	.I..9..	10	P048F			1.22	.45	1.11	
D111	5.03	-33.2	65.58	5.2	I	9	1.6			.050	.050	1.12	
A1208+02	12 8.50	2 17.0	280.18	111.5	.I..9..	10	P048N			1.13	.14	1.10	
D110	5.15	-33.2	63.08	-10.0			1.7			.046	.045	1.11	
N4157	12 8.56	50 45.7	138.48	65.3	.SXS35/	35	W060V	S FG		1.84	.62	1.69	
	5.02	-33.2	65.41	5.3	S 4	3*	3.4	S F*		.030	.024	1.71	
N4158	12 8.62	20 27.2	247.84	94.0	.SAR3*	3*	W100V	SD *FG		1.31	.05	1.30	
	5.11	-33.2	78.46	-4.5	S 0		3.4		4	.036	.032	1.32	
A1208+03	12 8.8	3 12	279.62	110.6	.I..9..	10	P048N			1.13	.00	1.13	
	5.15	-33.2	63.96	-9.7			1.8			.071	.071	1.14	
A1208+18	12 8.82	18 17.5	255.48	96.1	.I..9..	10	P048F			1.29	.69	1.13	
D112	5.12	-33.2	77.03	-5.1	I	8	1.5			.039	.038	1.14	
A1208+48	12 8.87	48 48.6	140.25	67.2									
MK200	5.03	-33.2	67.23	4.7									
N4162	12 9.34	24 24.0	229.38	90.3	RSAT4..	4	W100V	S F	4	1.40	.20	1.36	0.85
A1209+40	5.10	-33.2	80.59	-3.1	S 5	3	3.4	S AF	4	.034	.029	1.38	.05
MK435	12 9.41	40 55.7	151.52	74.7									
	5.05	-33.2	74.21	2.3									

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N ₀ N ₀ m.e. (28)	V ₀ ΔV (29)	
N4108				.27											150	
N4109				.20											47	
N4111	11.6	11.50	10.1	.20	0.88	0.40	0.90	0.44	.74					794	841	PT
A1204+17	11.50	.08	13.2	10.91	.02	.02	.02	.02	.28					0 3 14	47	
N4114				.25										6740	6668	S
														0 1 68	-72	
N4108B				.27											-194	
72439				.19											150	
A1204+40				.21	0.54		*		.44			.28		878	910	
N4116	12.4	12.4	14.6	12.03	.04							1.01		1 0 70	32	T
N4117	12.09	.1		.20								1.25	1.41	1323	1190	
												1.01		1 1 10	-133	
A1205+67		*		.27	*	*								2239	2390	
														0 2 43	151	
N4118				.20											48	
N4121				.26											142	
N4125	11.3	10.7	13.7	10.42	.88				.81					1339	1482	
N4124	10.73	.15		.19	.06	*								0 3 24	143	P
N4124	12.5	*	14.1	.21	*										-100	
N4123	12.01														-131	T
N4123	12.3	11.85	14.7	.21	0.62	-.07	*	*								
	11.74	.09		.33	.03	.04										
N4127				.29											185	
N4120				.28											159	
N4128	12.9		13.7	.19										2324	2481	
N4131	12.78			.23	.59	-.17								0 1 62	157	
N4129	12.9	13.2	13.8	.23	.06	.07								3710	3695	
	13.04	.15		.19										0 1 150	-15	S
N4132				.20										4069	4054	
N4135				.21	0.78	0.03	0.80	0.07	.66					0 1 150	-15	
A1206+47		14.90	12.1	14.58	.04	.04	.04	.04	.03					7202*	7268	
N4136	12.1	.09	14.1	.19										0 3 34	66	
N4137	11.58		14.4	.20										445	434	S
				.20										0 1 50	-11	
N4138	12.2	12.3	14.0	.20											53	
A1207+17	12.07	.15		.19	*	*								1039	1090	
27 57		*		.22										0 1 100	51	
N4142				.20										6620	6550	
N4143	12.2	12.1	13.8	11.81										0 1 185	-70	
A1207+42	12.08	.15		.20											93	
12 31				.21										784	830	
N4144	12.4		14.3	.19	0.54	-.10	0.62	0.00	.47			1.32*		0 1 100	46	
N4145	12.01		14.3	.19	.05	.05	.03	.03	-.15			1.04		7040	7085	
N4145	12.2	11.50	14.8	11.21	.05	.05	.03	.03	-.15					0 1 105	45	
N4148	11.56	.09		.19										260	324	
10764	12.9		14.5	.33										1 0 10	64	
N4146	12.35			.18										1001	1035	
														0 1 150	34	
														4695	4711	
														0 1 185	16	
N4151	11.2	11.13	12.1	.19	0.75	0.00	0.70	-.30	.67	1.58	.73	1.225	1.82		-234	
N4150	10.75	.05	14.5	10.83	.02	.1	.05	.1	-.06	3 2 4	.78	3.01	2.695	970	1002	P
A1208+70	12.6	.06	13.9	12.20	.02		*		.73					410	32	
N4152	12.7	12.5	12.5	.19	0.50	-.12	0.59	-.05	.67					0 1 50	235	PT
N4156	12.61	.13	14.0	.19	.05	.05	.04	.04	-.73					2181	2344	
		13.85	13.3	.19	0.83	0.00	0.89	0.06	-.08					0 1 105	163	
		.07	14.5	13.55	.03	.04	.04	.04							-74	P
A1208+40				.19										6765	6797	S
A1208+50				.21										0 1 50	32	
A1208+02				.21										1852	1886	
N4157	12.0		14.1	.21								.65		0 1 87	34	
N4158	11.56		14.1	.18								1.02		860	941	
	12.9											.73		1 0 20	81	
	12.84											1.01		1340	1207	
A1208+03				.21								1.50		1 0 10	-133	
A1208+18				.19								1.04		825*	907	S
A1208+48				.21										1 2 16	82	
N4162	12.6	12.25	12.0	.18	0.80	0.30	0.85	0.41	.71						-55	
A1209+40	12.58	.08	13.6	11.89	.03	.03	.03	.03	.22					4477	4551	
				.20										0 1 220	74	
														2491	2454	S
														0 1 69	-37	
														6704	6742	
														0 2 71	38	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ m.e. (13)	Log A _e m.e. (14)
N4163	12 9.64	36 26.9	163.20	78.9	..I..9..	10	P048C			1.29	.05	1.28	
	5.07	-33.2	77.70	.9			2.1			.044	.041	1.29	
N4165	12 9.65	13 31.5	267.55	100.7	..SXR1*	15	W060V			1.18	.14	1.14	*
	5.13	-33.2	73.36	-6.4			2.6		3 S	.037	.029	1.16	
N4169	12 9.7	29 27	197.35	85.6	..L.....	-2	P048N			1.32	.29	1.26	
	5.09	-33.2	81.12	-1.4			1.9			.050	.050	1.29	
N4168	12 9.74	13 29.0	267.69	100.8	..E..2...	-5	W060V			1.45	.04	1.44	1.00
	5.13	-33.2	73.34	-6.4	E 0		3.2	E2 K		.055	.035	1.47	.06
A1209+29	12 9.8	29 5	199.68	85.9									
	5.09	-33.2	81.21	-1.5									
N4174	12 9.9	29 25	197.51	85.6						.92	.38	.83	
	5.09	-33.2	81.17	-1.3						.042	.045		
A1209+37	12 9.9	37 13.2	160.26	78.2	..I..9..	10	P048N			1.40	.28	1.33	
	5.06	-33.2	77.14	1.2			2.1			.071	.071	1.34	
N4175	12 10.0	29 26	197.38	85.6	..S.....		P048N			1.31	.61	1.17	
	5.09	-33.2	81.19	-1.3			1.6			.039	.038	1.19	
N4178	12 10.23	11 8.8	271.87	103.0	..SBT8..	8	W100V	B AF	2	1.70	.40	1.61	
	5.13	-33.2	71.37	-7.0	SBS	3*	3.8	B AF		.029	.021	1.62	
I3044	12 10.26	14 15.3	266.60	100.1	..SBS6P*	6	P048C			1.33	.34	1.25	
	5.12	-33.2	74.06	-6.1			1.9			.038	.036	1.26	
N4179	12 10.31	1 34.7	281.63	112.3	..L....../	-2	W060V	D K	3	1.62	.54	1.50	0.85
	5.15	-33.2	62.57	-9.8	E 8		3.1			.037	.030	1.53	.04
N4180	12 10.50	7 19.0	276.80	106.7	..S...2*	2*	P048C			1.26	.39	1.17	
	5.14	-33.2	67.94	-8.1			1.7			.037	.035	1.19	
N4183	12 10.78	43 58.6	145.40	71.9	..SAS6S/	6	W060V			1.70	.74	1.09	
	5.03	-33.2	71.73	3.5		7*	3.6	S *F *	1	.033	.028	1.55	
A1211+16.	12 11.1	16 24	262.49	98.1	..SBS7P.	7	P200C			1.23	.31	1.16	
	5.12	-33.2	75.93	-5.2			3.3			.039	.038	1.17	
N4190	12 11.22	36 54.6	160.64	78.6	..I..9P.	10	P048C			1.24	.03	1.24	
	5.05	-33.2	77.59	1.3	I		2.0			.037	.035	1.25	
N4189	12 11.24	13 42.2	268.38	100.7	..SXT6S.	6	W060V			1.39	.06	1.38	
	5.12	-33.2	73.72	-6.0	S 5	3*	3.1	S AF	3 S	.027	.026	1.39	
N4192	12 11.26	15 10.8	265.44	99.2	..SXS2..	2	W100V	S FG		1.98	.48	1.87	1.55
	5.12	-33.2	74.96	-5.6	S 3 T	2*	4.3	S G	5VS	.022	.017	1.89	.04
N4193	12 11.35	13 27.0	268.92	100.9	..SXS5S*	5*	W060V			1.36	.27	1.29	
	5.12	-33.2	73.51	-6.1			2.8		3 S	.035	.027	1.31	
N4186	12 11.56	15 0.3	266.04	99.4	..SAS2*.	2	P048C			1.15	.11	1.12	
	5.12	-33.2	74.86	-5.5			1.8			.058	.051	1.14	
N4194	12 11.68	54 48.3	134.40	61.6	..IB..9P.	10	P200V			1.39	.17	1.34	0.405
MK201	4.96	-33.2	61.76	7.0			4.0		5	.041	.041	1.35	.06
N4196	12 11.9	28 42	201.82	86.4	..L...P*	-2	P048N			1.20	.12	1.17	
	5.08	-33.2	81.71	-1.2			1.9			.051	.058	1.20	
N4197	12 12.0	6 5	278.92	108.0	..S...6..	6	P048N			1.55	.73	1.38	
	5.14	-33.2	66.94	-8.1			1.9			.039	.038	1.40	
A1212+13	12 12.08	13 5.4	270.09	101.3	..I..9..	10	P048N			1.19	.40	1.09	
D114	12 12.12	13 13.2	270.09	101.3	..I..9..	8*	1.6			.039	.038	1.10	
I3059	12 12.38	13 44.2	269.17	100.7	..I..9..	10	P048F			1.24	.07	1.23	
D115	5.12	-33.2	73.89	-5.7	I	9*	2.0			.046	.045	1.24	
A1212+36A	12 12.45	36 29.8	161.11	79.1	..I..9..	10	P048F			1.03	.00	1.03	
D113	5.05	-33.2	78.06	1.4	S		1.6			.050	.050	1.04	
A1212+36B	12 12.5	36 14	161.96	79.3	..S...8*.	8*	P048N			1.18	.15	1.15	
	5.05	-33.2	27.46	-16.8			1.8			.039	.038	1.16	
I3061	12 12.52	14 18.5	268.19	100.2	..SB..5S/	5	P048C			1.36	.61	1.21	
	5.12	-33.2	74.39	-5.5			1.7			.038	.031	1.23	
N4203	12 12.57	33 28.7	173.02	82.0	..LX..-*	-3*	W100V	E3 K	3	1.56	.04	1.56	1.00
	5.06	-33.2	80.08	.5	E P		3.9	D GK	04	.056	.038	1.59	.07
N4204	12 12.7	20 56	249.06	93.9	..SBS8..	8	P048N			1.62	.06	1.61	
	5.10	-33.2	79.50	-3.4			2.8			.046	.045	1.62	
N4206	12 12.74	13 18.2	270.21	101.2	..SAS4*.	4	W100V			1.72	.63	1.57	
	5.12	-33.2	73.56	-5.8			3.6		3VS	.028	.020	1.59	
A1212+06	12 12.76	6 2.4	279.41	108.1	..E..0.P*	-5	P048C			.75	.17	.71	
	5.14	-33.2	66.97	-7.9			.9			.075	.100	.74	
N4210	12 12.86	66 15.8	128.74	50.5	..SBR3..	3	W060V	SB *F	3 S	1.34	.10	1.32	
	4.82	-33.2	50.73	10.3			2.9			.035	.030	1.35	
N4207	12 13.0	9 52	275.48	104.5			1.7			1.26	.26	1.20	
	5.13	-33.2	70.52	-6.7			1.6			.042	.045		
N4211A	12 13.07	28 27.3	203.34	86.7	..S...0P.	0	P200C			1.16	.00	1.16	
	5.07	-33.2	82.00	-1.0			3.4			.061	.058	1.18	
N4211B	12 13.09	28 26.8	203.40	86.8	..LB...P.	-2	P200C						
	5.07	-33.2	82.00	-1.0									
A1213-34	12 13.1	-34 37	294.69	148.8	..SBS5..	5	P048C						
	5.26	-33.2	27.46	-16.8									
N4212	12 13.11	14 10.8	268.90	100.3	..SAS4S.	4	P048C		4	1.48	.16	1.44	1.00
	5.12	-33.2	74.36	-5.4	S 5	5	2.4	S F	3	.026	.022	1.46	.05
N4214	12 13.14	36 36.5	160.25	79.0	..IXS9..	10	P200V	I A		1.90	.10	1.88	1.42
	5.04	-33.2	78.07	1.6	I 9	6	5.0	I A		.028	.020	1.89	.04
I3074	12 13.2	10 58	274.17	103.4	..SBS8./	8	P048C			1.36	.61	1.22	
	5.12	-33.2	71.54	-6.4			1.7			.039	.058	1.23	
N4218	12 13.29	48 24.5	138.88	67.8	..S...1S.	15	P048C			1.08	.20	1.04	
	4.98	-33.2	67.88	5.3			1.5			.036	.032	1.06	
N4216	12 13.35	13 25.4	270.46	101.1	..SXS3*.	3	W100V	S G	4	1.92	.58	1.78	1.27
	5.12	-33.2	73.73	-5.6	S 3	3	4.1	S G	5 S	.021	.016	1.80	.03
N4217	12 13.35	47 22.3	139.91	68.8	..S...3./	3	W060V	S *G *		1.74	.49	1.63	
	4.99	-33.2	68.84	5.0	S 3		3.4	S GK*		.031	.025	1.65	
N4215	12 13.36	6 40.8	279.18	107.6	..LAR..*/	-1	W100V			1.29	.41	1.19	
	5.14	-33.2	67.62	-7.6	S 4	5*	3.0	D *K *	4ES	.038	.033	1.22	
A1213+41	12 13.43	41 12.2	148.61	74.7									
MK 46	5.02	-33.2	74.38	3.1									
A1213+40	12 13.49	40 51.0	149.25	75.0									
MK 47	5.02	-33.2	74.69	3.0									
N4221	12 13.60	66 30.6	128.54	50.3	..RLBR...*	-1	W060V		4VS	1.37	.10	1.34	
	4.80	-33.2	50.51	10.5			3.0			.038	.033	1.37	
N4220	12 13.72	48 9.5	138.95	68.0	..LAR...*	-1	W060V	D *FG	2	1.61	.43	1.51	
	4.98	-33.2	68.14	5.3	S 0*		3.2	S *FG	3 S	.036	.028	1.54	
N4219	12 13.8	-43 3	296.21	157.6	..SAS4..	4	C060C			1.65	.42	1.55	
	5.30	-33.2	19.09	-17.6			3.2			.120	.075	1.60	
N4222	12 13.83	13 35.2	270.54	101.0	..S...7*/	7*	W100V			1.52	.77	1.34	
	5.12	-33.2	73.93	-5.4			3.4			.028	.022	1.35	
A1213-11	12 13.90	-11 15.1	289.43	125.2	..I..9..	10	P048F			1.15	.64	1.00	
D116	5.19	-33.2	50.42	-12.2	I	9	1.2			.061	.058	1.01	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _c (15)	B _T m.e. (16)	m' ₂₅ B _T (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _H N _H N _H N _H (24)	α- α+ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)			
N4163				.19												18		
N4165		13.8 .13	14.2	.19	0.60 .05	0.16 .05	*	*								-85 3827	ST	
N4169				.19											3840 0 1 150	-13		
N4168	12.8 12.25	12.25 .07	12.7 14.4	.19	0.99 .04	0.39 .06	1.00 .04	0.42 .04								-85 4035	T	
A1209+29				.19											4050 0 1 150	-15		
N4174				.19											4161 0 1 150	4148 -13		
A1209+37				.19												22 4061		
N4175				.19											0 1 150	-13		
N4178	12.4 12.04	11.89 .11	14.2	.19 11.38 .19	.50 .07				.38			1.67 1 .02	.99		0 1 150 1 1 26	202 -95	PST	
I3044																-82		
N4179	11.8 11.68	11.80 .08	11.5 13.4	.21 11.35 .20	0.91 .03	0.51 .06	0.96 .02	0.55 .03	.80 .42						1279 0 1 50	1144 -135		
N4180				.20												-111	S	
N4183	12.6 12.40		13.9	.20 .19								1.34 1 .04			928 1 0 10	53	P	
A1211+16. V12R				.19												-72	P	
N4190 V104	13.2 13.00		14.0	.19												21		
N4189	13.0 12.73	12.515 .09	14.2	.19 12.26 .07	.77 .07				.70			.93 1 .01	1.98		2097 1 1 10	2013 -84	PST	
N4192	11.4 10.71	10.865 .07	14.1 14.4	.19 10.29 .19	0.79 .03	*	0.87 .03	0.43 .05	.66			1.68 1 .02	2.05		-129 1 1 34	-206 -77	PT	
N4193		13.23 .11	14.2	.19	.87 .07					2.16 2 2 3	.36 .65*					-85	T	
N4186				.19												-78 2629	P	
N4194 12 33=V261		12.95 .09	10.4 14.3	.23 12.55	0.52 .02	-.16 .02	0.48 .02	-.24 .03	.41 -.24			.40 2 .01	3.01		2528 2 4 15	3966 -16		
N4196				.19											3982 0 1 150			
N4197				.20												-116 569		
A1212+13				.19								.54 1 .02			655 1 0 70	-86		
I3059				.19												-83 304		
A1212+36A				.19								1.07 1 .01			284 1 0 10	20		
A1212+36B				.19											3925 0 1 185	3943 18		
I3061		14.36 .11	14.5	.19 12.0	.77 .07											-80 1001	T	
N4203	12.0 11.45	11.55 .09	14.1	.19 11.34 .19	0.89 .04	*	0.92 .03	0.52 .06	.84						1001 0 1 150	1007 6	P	
N4204				.19												-51	PT	
N4206		12.79 .11	14.7	.19	.67 .07											-84		
A1212+06		15.0 .15	13.3	.20 14.77 .27	.39 .06	-.47 .07			.32 -.49						1960 0 1 52	1845 -115	P	
N4210				.20												148		
N4207				.19												-99		
N4211A V199				.19											6576 0 2 24	6560 -16	P	
N4211B V199				.19											6658* 0 2 51	6642 -16	P	
A1213-34				.38											7741 0 1 20	7500 -241		
N4212	12.1 12.05	11.875 .08	12.4 13.7	.19 11.54	0.70 .04	0.07 .05	0.70 .04	0.16 .05	.61 .00						2027 0 1 61	1947 -80	PT	
N4214	10.7 10.35	10.20 .08	12.8 14.3	.19 9.91 .20	0.46 .03	-.30 .05	0.44 .02	-.33 .04	.39 -.35			2.25 1 .01	1.03		289 2 3 7	309 20	PST	
I3074				.20												-94 1388		
N4218				.21											0 1 55	1462 74		
N4216	11.3 10.88	10.915 .07	12.7 13.9	.19 10.26 .21	0.99 .05	0.55 .05	1.01 .03	0.61 .03	.84 .39			1.21 1 .04 1.34 1 .03	3.21		15* 1 2 32 985 1 0 64	-69 -84 1054 69	PT	
N4217		11.9*	13.6	.20												-112 3782	PT	
N4215		12.8 13.06	13.4	.20											3740 0 1 105	42 5921 5961 40		
A1213+41				.20														
A1213+40				.20														
N4221				.27												149 979 0 1 50	1052 73	P
N4220	12.4 12.06	12.2 .15	14.0	.21 11.72 .51												-254		
N4219	12.7 12.30		14.3	.19												-83 984 -180		
N4222				.19														
A1213-11				.24								.78 1 .06			1164 1 0 15			

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log D ₀ (12)	Log Ae m.e. (13)
N4226	12 13.95 4.98	47 18.2 -33.2	139.72 68.95	68.9 5.1	.S...1P\$	1	P048C			1.13 .036	.30 .032	1.06 1.08	
N4227	12 14.0 5.05	33 48 -33.2	170.49 80.12	81.7 .9	.SX.0*.	0	P048N			1.26 .039	.20 .038	1.21 1.23	
N4224	12 14.01 5.13	7 44.4 -33.2	278.54 68.67	106.6 -7.1	.SAS1*/ S 0	1	W100V	DS *K *		1.38 .035	.36 .028	1.30 1.32	
A1214+58 MK 48	12 14.02 4.90	58 9.5 -33.2	131.87 58.64	58.4 8.3									
A1214+29 D117	12 14.18 5.06	29 0.4 -33.2	199.14 82.16	86.3 -6	.I...9.. I	10 9	P048N			1.20 .046	.06 .045	1.19 1.20	
N4236	12 14.32 4.72	69 45.0 -33.2	127.42 47.35	47.1 11.4	.SBS8.. SB7	8 7	P200V	RI *A RS A	1	2.27 .026	.43 .019	2.17 2.19	*
N4232	12 14.34 4.98	47 43.0 -33.2	139.13 68.59	68.5 5.2	.SX.4P*	4	P048C			1.18 .036	.24 .032	1.12 1.14	
N4231	12 14.34 4.98	47 44.1 -33.2	139.11 68.57	68.5 5.2	.LA..+P\$	-1*	P048C			1.16 .040	.04 .038	1.15 1.18	
N4238	12 14.5 4.83	63 42 -33.2	129.39 53.27	53.1 9.8	.S...6.. S	6	P048N			1.29 .039	.52 .038	1.17 1.19	
N4233	12 14.58 5.13	7 54.1 -33.2	278.74 68.87	106.5 -7.0	.L...+.. E	-1	P048C	D K *		1.37 .048	.33 .037	1.30 1.33	
N4234	12 14.60 5.14	3 57.7 -33.2	282.20 65.17	110.3 -8.1	.SBS8.. SB7	8 7	PG48C	SI *A *		1.11 .041	.02 .035	1.10 1.11	*
N4235	12 14.61 5.13	7 28.1 -33.2	279.19 68.47	106.9 -7.1	.SAS1/ S 0	1	W100V	D *FG*	04 S	1.63 .027	.60 .023	1.49 1.51	
A1214-11 D118	12 14.62 5.19	-11 24.1 -33.2	289.75 50.31	125.4 -12.1	.I...9.. I	10 9	P048N			1.05 .039	.32 .038	.98 .99	
N4237	12 14.65 5.11	15 36.1 -33.2	267.22 75.76	99.1 -4.6	.SXT4.. S	4	W100V	SD FG	3 S	1.36 .033	.16 .027	1.32 1.34	*
N4241	12 14.88 5.13	6 58.1 -33.2	279.84 68.02	107.4 -7.2	.SAS0*.	0	P048C			1.39 .043	.25 .033	1.33 1.35	
N4244	12 14.99 5.02	38 5.2 -33.2	154.57 77.16	77.7 2.4	.SAS6*/ S 6	6 7*	P200V	SI *AF S *AF*	3VS	2.21 .024	.81 .017	2.02 2.03	1.65 .04
N4242	12 15.01 4.98	45 53.8 -33.2	140.78 70.32	70.3 4.8	.SXS8.. S 6	8 7	W060V	I L *AF SD *F		1.68 .031	.10 .023	1.66 1.67	1.45 .05
N4245	12 15.09 5.06	29 52.9 -33.2	192.56 82.16	85.5 -1	.SBR0*. SX4	0 5	W100V	B G B K	3 4VS	1.52 .039	.10 .032	1.49 1.51	0.90 .04
N4250	12 15.10 4.67	71 4.8 -33.2	126.96 46.06	45.8 11.8	.LXR+.. S	-1	W060V			1.43 .048	.11 .045	1.40 1.44	
N4219A	12 15.13 5.32	-43 14 -33.2	296.53 18.94	157.9 -17.4	.SB.3\$.	3\$	P048C		4VS	1.21 .158	.36 .100	1.13 1.18	
A1215+17	12 15.3 5.10	17 42 -33.2	262.57 77.57	97.1 -3.9	PSBS3.. S	3	P048N			1.25 .039	.25 .038	1.19 1.21	
I3112	12 15.3 5.07	26 18 -33.2	219.41 82.40	89.0 -1.2						1.12 .075	.25 .100	1.06 1.08	
N4248	12 15.36 4.97	47 41.2 -33.2	138.72 68.68	68.6 5.4	.I.0.\$/ S	0\$	PG48C			1.47 .035	.39 .027	1.38 1.41	
N4246	12 15.42 5.13	7 27.9 -33.2	279.70 68.54	107.0 -6.9	.SASS.. S	5	W100V		3 S	1.40 .033	.23 .026	1.34 1.36	
N4247	12 15.42 5.13	7 33.1 -33.2	279.62 68.62	106.9 -6.9	RSXS2P\$ S	2	W100V		4	.83 .050	.07 .050	.81 .83	
I3115	12 15.45 5.13	6 55.9 -33.2	280.23 68.04	107.5 -7.0	.SBS5.. S	5	P048C			1.23 .038	.09 .032	1.21 1.23	
A1215+58 MK202	12 15.49 4.87	58 56.1 -33.2	131.15 57.93	57.7 8.7									
I0773	12 15.58 5.13	6 25.1 -33.2	280.77 67.57	108.0 7.1	.LB..+\$. S	-1	P048C			1.26 .183	.28 .088	1.19 1.22	
N4251	12 15.60 5.06	28 27.1 -33.2	202.95 82.55	86.9 -5	.LB..+\$/ E 7	-2	W060V	D K	3 04 S	1.62 .040	.35 .028	1.54 1.57	
A1215+44 MK203	12 15.73 4.98	44 27.0 -33.2	142.20 71.69	71.7 4.5						.042 .045	.09 .045	.83 1.04	
N4253	12 15.92 5.05	30 5.3 -33.2	190.71 82.27	85.4 .1	PSBS1\$. S	1	P048C			1.05 .036	.04 .034	1.04 1.06	
N4252	12 15.96 5.14	5 50.3 -33.2	281.50 67.05	108.6 -7.2	.S...3\$/ S	3\$	P048C			1.17 .037	.54 .035	1.04 1.06	
N4254	12 16.29 5.11	14 41.7 -33.1	270.44 75.19	100.1 -4.5	.SASS.. S 5	5	P200V	S F S FG	4 S	1.73 .024	.05 .021	1.72 1.74	1.34 .03
I0775	12 16.35 5.11	13 11.5 -33.1	273.16 73.87	101.5 -5.0	.LB..-P* S	-3	P048C			1.14 .071	.13 .069	1.11 1.14	
N4256	12 16.35 4.75	66 10.6 -33.2	128.22 50.89	50.7 10.7	.SAS3*/ S 3*	3*	W060V	S GK	34 3 S	1.66 .032	.68 .026	1.50 1.53	
I3136	12 16.42 5.13	6 27.8 -33.1	281.25 67.68	108.0 -6.9	.SB.5\$.	5	P048C			1.06 .037	.51 .034	.94 .96	
N4258	12 16.49 4.95	47 35.0 -33.1	138.33 68.84	68.7 5.5	.SXS4.. S 4PT *	4	....V 5.0	S G S G	3	2.26 .026	.36 .019	2.18 2.20	1.75 .04
N4257	12 16.56 5.13	6 0.2 -33.1	281.73 67.26	108.5 -7.0	.S...2*/ S	2*	P048C			1.08 .041	.49 .037	.97 .99	
A1216+04. MK 49	12 16.61 5.14	4 8.0 -33.1	283.22 65.48	110.3 -7.5	.E.3.\$. S	-5\$	P048C			.81 .042	.07 .045	.79 .82	*
A1216+14	12 16.7 5.11	14 9 -33.1	271.79 74.76	100.6 -4.6									
N4259	12 16.82 5.14	5 39.3 -33.1	282.17 66.95	108.8 -7.1	.L...+/ S	-2	P048C			1.06 .041	.38 .036	.97 1.00	*
N4260	12 16.82 5.13	6 22.6 -33.1	281.57 67.63	108.1 -6.9	.SBS1.. SB2	1 5*	W100V	R GK R G	4 S	1.42 .031	.28 .024	1.35 1.37	0.90 .06
N4261	12 16.84 5.13	6 6.1 -33.1	281.82 67.37	108.4 -6.9	.E+2... E 2	-5 2	W100V	E3 K DE K	3	1.59 .039	.08 .035	1.58 1.61	1.14 .03
N4262	12 16.97 5.10	15 9.3 -33.1	270.10 75.67	99.7 -4.2	.LBS-\$. E 1	-3	P200V			1.34 .057	.03 .040	1.33 1.36	0.75 .07
N4264	12 17.04 5.13	6 7.4 -33.1	281.92 67.41	108.4 -6.9	.LBT+.. S	-1	W100V	R K	5 3	1.03 .039	.08 .036	1.01 1.04	*
N4266	12 17.16 5.13	5 49.0 -33.1	282.25 67.13	108.7 -6.9	.SBS1\$/ S	1	P048C			1.32 .035	.61 .031	1.18 1.20	
I3155	12 17.21 5.13	6 17.0 -33.1	281.89 67.57	108.2 -6.8	.L...+/ S	-2	P048C			1.03 .040	.28 .039	.96 .99	
N4267	12 17.21 5.11	13 4.6 -33.1	274.02 73.86	101.7 -4.8	.LBS-\$. E 2	-3	W100V	D GK	3 04	1.54 .036	.03 .035	1.53 1.56	1.15 .04
N4268	12 17.24 5.14	5 33.7 -33.1	282.50 66.89	108.9 -7.0	.SB.0\$/ S	0*	P048C			1.21 .035	.41 .026	1.12 1.14	0.60 .07
N4269	12 17.27 5.13	6 17.6 -33.1	281.92 67.59	108.2 -6.8	.L..... S	-2	P048C			1.19 .048	.17 .043	1.15 1.18	

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₅ m' ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N4226				.21												69
N4227				.19											4765	4773
N4224	13.0	12.95		.20	1.11										0 1 185	8
A1214+58	13.04	.11	13.8	.24	.07										4689	-107
A1214+29				.19								.81			0 1 105	4805
												1.01			1216	116
															1 0 10	1203
N4236	11.3	9.95		.29	0.40	*	*	*	.25						-1	160
N4232	10.41	.13	15.1	9.32	.05							2.45	1.09		2 1 7	161
N4231				.21								1.02				71
N4238				.26												71
ZCG																138
N4233	13.0	13.08		.20	1.09											-106
	12.92	.11	14.0		.07											
N4234	13.0	13.5		.20	0.57	-.20	*	*	.51	2.33	.88		-2.51		2075	1952
N4235	13.10	.1	13.8	13.28	.05	.04			-.25	6 3 4	.88				0 1 66	-123
	12.8	12.645		.20	1.04											-108
A1214-11	12.51	.09	14.1	.24	.07										1307	1127
N4237	12.6	12.50		.19	0.85	*									1 0 100	-180
N4241	12.65	.09	13.7	.20	.04											-73
		13.05	14.2		1.05											-110
		.11			.07											
N4244	11.0	10.5	14.2	.19	0.44	*	0.54	0.01	.24			2.745			242	270
	10.31	.1	14.4	9.66	.03		.03	.05				2.10	-1.75		3 1 6	28
N4242	11.8	11.6	14.3	.21	0.55	-.13	0.65	-.12	.48						0 1 107	686
	11.41	.1	14.6	11.31	.05	.05	.04	.05	-.18						0 1 107	63
N4245	12.3	12.25	12.2	.19	0.89	0.39	0.92	0.45	.82						890	882
	12.03	.09	14.4	11.98	.04	.05	.04	.04	.34						0 1 65	-8
N4250				.29												
72447																166
N4219A				.51												-253
A1215+17				.19												-64
I3112				.18												-25
N4248		13.19		.21	.61											71
		.11	14.4		.07											
N4246		13.43		.20	.73				.62						3724	3616
		.11	14.7	13.03	.07										1 1 10	-108
N4247				.20												-107
I3115		13.78		.20	.70											-110
		.11	14.6	.24	.07											6374
A1215+58				.20											6255	119
I0773															0 1 220	-112
N4251	11.6	11.6		.19											1014	999
A1215+44	11.45	.15	13.7	11.25	.20										0 1 75	-15
															7445	7502
															0 1 220	57
N4253				.19												-7
N4252				.20												-114
N4254	10.5	10.425	12.6	.19	0.58	-.02	0.64	0.04	.51	1.72	1.00	1.86	2.13		2400	2324
	10.29	.06	13.8	10.18	.03	.05	.02	.04	-.07	5 5 5	1.00	1.01	1.73		1 2 16	-76
I0775		14.25		.19	1.00											-83
		.09	14.5		.04											2679
N4256	13.0			.27											2531	148
	12.67		14.1												0 1 77	
I3136				.20												-111
N4258	10.2	8.95	13.2	.21	0.68	*	0.78	0.12	.56	1.96	.90		3.24		465	537
	9.18	.08	14.2	8.45	.04		.04	.05		7 7 4	.90*				1 7 6	72
N4257				.20												-113
A1216+04		*		.20	*	*	*	*							1582	1461
ZCG															0 2 39	-121
A1216+14				.19											-215	-293
															0 1 30	-78
N4259		14.55		.20	0.99	*										-114
		.09	13.8		.05											1735
N4260	12.7	12.65	12.6	.20	0.93	0.46	0.97	0.50	.82						1846	-111
	12.70	.09	13.9	12.20	.03	.04	.03	.05	.37						0 1 74	2090
N4261	11.7	11.325		.20	0.99	0.55	0.99	0.60	.92	3.26	.53		-2.65		2202	-112
		.04	14.1	11.09	.02	.03	.01	.02	.51	24 6 7	1.07				0 1 75	1356
N4262	12.6	12.40	11.6	.19	0.93	0.49	1.00	0.59	.87						0 1 36	-74
	12.37	.05	13.9	12.18	.02	.02	.03	.04	.45							-112
N4264		13.8		.20	0.93	0.57	*	*								-113
		.1	13.6		.05	.06										-111
N4266				.20												1260
I3155				.20												0 1 75
N4267	12.6	11.805	13.0	.19	0.91	0.48	0.93	0.53	.85							-83
	11.91	.05	14.3	11.59	.02	.03	.02	.03	.44							-114
N4268		13.55	12.0	.20	1.04	0.42	1.01	0.47								-111
		.09	13.4		.05	.05	.05	.05								-111
N4269				.20												

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D ₀) Log D ₀ (13)	Log Ae m.e. (14)
N4270	12 17.28 5.13	5 46.5 -33.1	282.38 67.07	108.8 -6.9	.L..... S 0	-2	W060V 2.7	D K		1.34 .036	.35 .026	1.25 1.28	0.70 .07
N4272	12 17.3 5.04	30 27 -33.1	187.39 82.43	85.1 .5	.E.1.... RSBR2..	-5	P048N 1.7			1.10 .071	.04 .071	1.09 1.12	
N4274	12 17.33 5.04	29 53.3 -33.1	191.43 82.62	85.7 .3	S 4 S 4	2	P200V 4.7	SDP*G DS GK	3	1.84 .027	.39 .019	1.75 1.77	1.20 .02
N4273	12 17.38 5.14	5 37.3 -33.1	282.54 66.96	108.9 -6.9	.SBSS.. S 5 KT	5	W060V 2.9	SB *F SD FG		1.36 .027	.17 .024	1.32 1.34	0.90 .04
N4275	12 17.4 5.05	27 54 -33.1	207.09 82.99	87.6 -3	.S...S. P048N	5	1.5			1.00 .039	.04 .038	.99 1.01	
N4277	12 17.51 5.14	5 37.2 -33.1	282.62 66.97	108.9 -6.9	.SXT0*. E 1	0	PG48C 1.8			.97 .038	.05 .031	.96 1.55	
N4278	12 17.60 5.04	29 33.6 -33.1	193.78 82.77	86.0 .3	.E.1... E 1	-5	P200V 4.5	E1 K DE K	3	1.56 .051	.030 .030	1.58 1.58	1.00 .04
A1217+12	12 17.8 5.11	12 28 -33.1	275.41 73.38	102.3 -4.9	.L...*/ E 5	-1*	W060V 3.0	F6 K		1.49 .038	.31 .028	1.42 1.45	0.85 .05
N4281	12 17.81 5.13	5 39.9 -33.1	282.76 67.03	108.9 -6.8	.E.0... E 0	-5	P200V 3.7	E1 K	3	1.15 .045	.01 .032	1.14 1.17	0.70 .09
N4283	12 17.83 5.04	29 35.2 -33.1	193.47 82.81	86.0 .3									
N4291	12 18.12 4.40	75 38.8 -33.1	125.56 41.60	41.3 13.0	.E.+2... E 1	-5	P048C 2.2	E3 K E4 K		1.34 .063	.07 .051	1.32 1.37	
N4288	12 18.17 4.94	46 34.1 -33.1	138.56 69.89	69.8 5.5	.SBSS.. SAR0*	9	P048C 2.2			1.36 .042	.13 .036	1.34 1.35	
D119	12 18.19 5.04	29 37.3 -33.1	193.02 82.88	86.0 .4		85	P200V 2.0			1.28 .035	.20 .031	1.24 1.26	
N4286	12 18.19 4.83	58 22.3 -33.1	130.71 58.57	58.4 8.9	.SBT2*. SB3 N *	2*	W060V 3.0	B F		1.40 .035	.13 .030	1.37 1.40	
N4289	12 18.48 5.14	3 59.8 -33.1	284.39 65.49	110.5 -7.1	.S...6*/ RSBS0..	6*	P048C 1.8		4VS	1.59 .039	.93 .038	1.37 1.39	
N4293	12 18.69 5.09	18 39.7 -33.1	262.86 76.83	96.5 -2.8	P P	0	W100V 4.1	S *FG* SDP G *	2 3VS	1.78 .025	.31 .023	1.71 1.73	*
N4295	12 18.7 5.04	28 26 -33.1	202.47 83.23	87.2 .2									
N4292	12 18.72 5.14	4 52.4 -33.1	283.91 66.35	109.7 -6.8	.LB.0*. SBSS..	-2	P048C 2.0			1.32 .048	.18 .045	1.28 1.31	
N4294	12 18.75 5.11	11 47.4 -33.1	277.10 72.85	103.0 -4.8	.SBS5.. SAS K *	6	M082C 3.2	SB A	1	1.49 .032	.37 .025	1.40 1.41	
A1218+46 D120	12 18.80 4.94	46 5.3 -33.1	138.75 70.38	70.3 5.5	.1A.9.. I	10	P048N 2.1			1.41 .046	.28 .045	1.35 1.36	
N4298	12 19.01 5.10	14 53.1 -33.1	272.37 75.67	100.1 -3.9	.SATS.. S KT*	5	W100V 3.6	SI *AF SD AF		1.50 .030	.22 .022	1.44 1.46	
N4301	12 19.02 5.14	5 3.4 -33.1	283.96 66.54	109.5 -6.7	.SA.15. SBRS3..	1	P048C 1.4			1.14 .036	.45 .036	1.04 1.06	
A1219+41	12 19.1 5.07	41 8 -33.1	145.19 74.96	75.1 4.1			P048N 2.0			1.24 .039	.04 .038	1.23 1.25	
10783	12 19.11 5.09	16 1.4 -33.1	270.15 76.68	99.0 -3.5	.SXT05. SBSS*	3	PG48C 2.2			1.18 .039	.02 .038	1.18 1.20	0.90 .04
N4299	12 19.14 5.11	11 46.8 -33.1	277.41 72.88	103.1 -4.7	.SXS8*. S K	8 7*	M082C 3.1			1.24 .035	.03 .027	1.23 1.24	
N4302	12 19.17 5.10	14 52.6 -33.1	272.52 75.68	100.1 -3.8	.S...5*/ SKT4..	5*	W100V 2.6	S F S S		1.72 .030	.66 .022	1.56 1.58	
N4303	12 19.16 5.14	4 45.1 -33.1	284.38 66.28	109.9 -6.7	.E.1.*. S 5	1	P200V 4.9	S F S F	4 5	1.78 .023	.04 .019	1.77 1.79	1.35 .04
N4308	12 19.4 5.03	30 20 -33.1	186.90 82.89	85.4 .9		-5*	P048N 1.5			1.01 .050	.06 .050	1.00 1.03	
N4305	12 19.52 5.10	13 1.1 -33.1	275.95 74.05	101.9 -4.3	.SAR1.. LBSS*.	1	P048C 2.0			1.34 .036	.23 .033	1.28 1.30	0.90 .06
N4306	12 19.53 5.10	13 3.9 -33.1	275.89 74.10	101.9 -4.3		-1	P048C 1.9			1.21 .065	.08 .053	1.19 1.21	
N4307	12 19.55 5.12	9 19.1 -33.1	280.60 70.63	105.5 -5.4	.S...3./ S 2	3	P048C 2.1	SD G *		1.57 .034	.60 .029	1.43 1.45	
N4319	12 19.57 4.35	75 35.9 -33.1	125.45 41.66	41.4 13.1	.SBR2.. SBSS3..	2	P048C 2.5	B G	4VS	1.49 .035	.10 .030	1.47 1.50	
N4304	12 19.58 5.30	-33 12.5 -33.1	285.97 15.3	147.6 -15.3	SB4 *	1	P048C 2.0			1.38 .056	.00 .048	1.38 1.42	1.00 .04
N4309	12 19.66 5.13	7 25.3 -33.1	282.47 68.85	107.3 -5.9	.LXR*.. LBRS*.	-1	W100V 3.2			1.31 .040	.23 .040	1.25 1.28	
10783A	12 19.80 5.09	16 0.6 -33.1	270.80 76.75	99.1 -3.3		-2	P048C 1.2			.81 .075	.00 .100	.81 .84	0.55 .05
N4303A	12 19.90 5.14	4 50.6 -33.1	284.63 66.40	109.8 -6.6	.SBSS6.. PLXR*.	6	P048C 2.0			1.22 .036	.06 .027	1.21 1.23	
N4310	12 19.94 5.03	29 29.0 -33.1	193.24 83.28	86.2 .7		-1	P048C 2.1			1.41 .048	.25 .044	1.35 1.37	
N4312	12 19.98 5.09	15 49.0 -33.1	271.37 76.60	99.3 -3.4	.SAT2*./ SBT1..	2	P048C 2.4			1.67 .033	.55 .025	1.54 1.56	
N4314	12 20.05 5.03	30 10.1 -33.1	187.72 83.08	85.6 1.0		1	P200V 4.7	BP B K	4 5	1.68 .029	.05 .024	1.67 1.69	1.10 .04
A1220+12	12 20.1 5.11	12 26 -33.1	277.26 73.58	102.5 -4.3									
N4313	12 20.10 5.11	12 4.7 -33.1	277.75 73.25	102.9 -4.4	.SAT25./ S 4	2*	P048C 2.2		3 S	1.59 .033	.54 .028	1.46 1.48	
A1220+22 MK438	12 20.37 5.06	22 43.3 -33.1	247.26 82.01	92.7 -1.2									
N4321	12 20.38 5.09	16 6.0 -33.1	271.14 76.90	99.0 -3.2	.SXS4*.. S 5	4	P200V 5.0	S FG S FG	4	1.84 .024	.05 .020	1.83 1.85	1.57 .02
N4332	12 20.43 4.66	66 7.4 -33.1	127.60 51.02	50.8 11.1	.SBSS1.. LBRS0*.	1	W060V 3.0			1.37 .038	.13 .036	1.34 1.37	
N4322	12 20.50 5.09	16 11.0 -33.1	271.07 76.99	99.0 -3.1		-2	P048C 1.7			1.12 .051	.09 .058	1.10 1.13	0.90 .04
N4324	12 20.56 5.13	5 31.7 -33.1	284.55 67.11	109.2 -6.2	.LAR*.. S 4	-1	W100V 3.3	SDP*GK D G	4 S	1.39 .036	.32 .028	1.32 1.35	
N4335	12 20.6 4.79	58 44 -33.1	130.02 58.28	58.1 9.2	.F.+2... SXP2*.	-5	P048N 2.2			1.35 .071	.10 .071	1.32 1.36	
N4326	12 20.65 5.13	6 21.0 -33.1	283.99 67.90	108.4 -6.0		2	W100V 3.2			1.24 .038	.09 .037	1.22 1.24	
13244	12 20.7 5.10	14 40 -33.1	274.24 75.67	100.4 -3.5						.08 .07	.06 .075	.85 1.00	
N4329	12 20.77 5.20	-12 17.0 -33.1	292.30 49.73	126.6 -10.8	.E.5... B060V	-5	2.2		3 S	1.09 .075	.31 .100	1.02 1.06	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m ₂₈ m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _g (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₀ m.e. (28)	V ₀ ΔV (29)	
N4270	12.8	13.10	12.1	.20	0.90	0.41	0.86	0.45	.80					2347	2233	T
N4272	12.91	.08	13.8	12.72	.04	.06	.04	.06	.35					0 1 50	-114	
				.19										8462	8457	
N4274	11.7	11.2	12.7	.19	0.93	0.41	0.96	0.47	.81			1.34		0 1 150	-5	PT
N4273	11.16	.2	14.3	10.69	.03	.04	.02	.02	.29			1.02	2.505	1 1 21	-7	
N4275	12.2	12.315	12.3	.20	0.45	*	0.53	-.23	.36					2302	2188	ST
	12.40	.06	13.5	11.96	.03		.03	.05						0 1 40	-114	
				.19										2307	2291	
														0 1 150	-16	
N4277		14.55		.20	1.03											T
N4278		.11	14.1		.07											
N4278	11.6	11.15	11.6	.19	0.94	0.46	0.96	0.50	.89	1.67	.00		1.47	659	-114	PT
A1217+12	11.19	.05	13.9	10.95	.02	.02	.02	.02	.42	3 311	.27			0 3 20	651	
				.19										272	187	
N4281	12.2	12.215	11.9	.20	0.95	*	0.97	0.48	.84					0 1 30	-85	T
N4283	12.11	.08	13.8	11.78	.03		.04	.06						2602	2488	
N4283	12.8	12.95	11.9	.19	0.94	0.48	0.95	0.50	.89					0 1 50	-114	T
	12.92	.05	13.7	12.74	.02	.03	.03	.03	.44					1133	1125	
														0 2 23	-8	
N4291	12.5	12.2		.32										1785	1967	
N4288	12.34	.15	13.7	11.85	.21							1.26		0 2 43	182	
N4286				.19								1.01		535	603	
N4290	12.7			.24										1 0 15	68	
N4289	12.59		14.1	.20											-8	
															118	
N4293	11.7	11.195		.19	*	*	*	*				.81			-120	
N4295	11.21	.10	14.2	10.77								1.02	3.77	882*	825	PT
N4292				.19										1 1 42	-57	
				.20										8568	8555	
N4294	13.0	12.59		.19	.53				.41			1.10		0 1 150	-13	
A1218+46	12.82	.11	14.0	12.10	.07							2.02	1.69	415	328	T
				.21								.70		0 1 79	-87	
												1.01		465	531	
N4298	12.5	12.07		.19	.71				.62					1 0 10	66	
N4301	12.34	.11	13.9	11.70	.07									1116	1042	PT
				.20										0 1 19	-74	
A1219+41				.20												T
10783		14.35	14.3	.19	0.76	*	0.79	0.19						6906	-115	
N4299	13.1	.09	15.0	.19	.05		.03	.06						1 1 13	44	
	13.00	12.87		.19	.42				.37			1.02		212	-69	PT
		.11	13.8	12.66	.07							1.01	1.35	0 1 61	-87	
N4302	13.2	12.53		.19	.90											PT
N4303	12.70	.11	14.3	.20	.07	*	0.62	0.13	.48	1.60	.90	1.85	2.63	1599	-74	
N4308	10.4	10.215	12.4	.20	0.54		.03	.05		4 2 5	.97	3.01	1.97	3 2 6	1483	PST
	10.10	.06	13.9	9.97	.03		.03	.05						606	-116	
N4305		13.25	13.2	.19	0.70		0.72	.04						0 1 150	602	
N4306		.08	14.2	.19	.02										-4	
															-81	
N4307	13.0			.20											-81	
N4319	12.82		14.0	.32											-97	
N4304	12.4	12.75	13.2	.36	0.73	0.07	0.81	0.14						1685	-1867	
N4309	12.29	.13	14.5	.20	.05	.05	.04	.04						0 1 73	182	
10783A		16.50	14.7	.19	0.79	0.06	0.79	0.10							-235	
		.09	15.4		.04	.04	.03	.04							-105	
N4303A		13.43		.20	.43										-68	
N4310		.11	14.2	.19	.07											
N4312		12.59		.19	.81									901	-116	
N4314	11.7	.11	14.4	.19	.07									0 1 150	893	PT
A1220+12	11.19	11.35	12.3	.19	0.84	0.30	0.86	0.35	.78					883	-69	PT
		.08	14.5	11.11	.02	.05	.03	.03	.25					0 1 85	879	
				.19										44	-4	
														0 1 30	-84	
N4313				.19												
A1220+22				.19												
N4321	10.8	10.105	13.4	.19	0.73	*	0.71	0.10	.67	1.54	.58	1.22	2.88	6657	-85	
N4332	10.23	.06	14.0	9.86	.03		.02	.05		6 2 3	1.26	4.01	3.65	0 2 71	6619	PST
				.27										1610	-38	
N4322		14.7	14.7	.19	0.78	*	0.80	0.30						3 2 7	1543	
		.1	14.9		.05		.04	.06							-67	
N4324	12.5			.20											149	
N4335	12.55		13.6	.24										1714	1602	
N4326				.20										0 1 50	-112	S
13244				.19											120	
N4329				.24											-109	
														12890	12816	
														0 1 19	-74	
															-179	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D) Log D ₀ (13)	Log Ae m.e. (14)
N4328	12 20.8 5.09	16 5 -33.1	271.57 76.93	99.1 -3.1	.LA.-*.	-3	P048C 1.9			1.17 .051	.03 .058	1.17 1.20	0.88 .05
N4333	12 20.82 5.13	6 19.1 -33.1	284.12 67.88	108.5 -5.9	.SBS2..	2	W100V 2.8		3V5	1.04 .038	.07 .036	1.02 1.04	
A1220+02 MK 50	12 20.85 5.14	2 57.3 -33.1	286.40 64.65	111.7 -6.9									
N4334	12 20.85 5.12	7 45.1 -33.1	282.97 69.25	107.1 -5.5	.SBS2..	2	N061C 2.8		4 S	1.38 .035	.32 .029	1.30 1.32	
N4339	12 21.03 5.13	6 21.6 -33.1	284.22 67.94	108.4 -5.9	.E+0... E 0	-5	W100V 3.5	E1 K D K	3	1.37 .045	.01 .037	1.37 1.40	0.95 .05
N4346	12 21.03 4.91	47 16.2 -33.1	136.58 69.39	69.3 6.2	.L.../	-2	W100V E 6	D K D K		1.55 .043	.39 .033	1.45 1.48	
N4340	12 21.06 5.08	17 0.1 -33.1	259.73 77.76	98.2 -2.8	.LBR... S80	-1	W060V 3.5	B *K B GK	4 S	1.61 .033	.10 .028	1.58 1.60	
I3253	12 21.1 5.31	-34 21 -33.1	296.49 27.90	148.8 -15.2	.SAS5..	5	P048B 2.0			1.52 .100	.31 .062	1.45 1.48	
N4344	12 21.10 5.08	17 49.1 -33.1	267.70 78.46	97.4 -2.5	.LB...*	-2	P048C 2.1			1.29 .049	.04 .047	1.28 1.31	
N4343	12 21.11 5.13	7 14.0 -33.1	283.58 68.78	107.6 -5.6	.SAT3*. S 0*	3	W100V 3.2	S GK SD GK	4	1.44 .037	.51 .026	1.32 1.34	
I3256	12 21.11 5.12	7 20.0 -33.1	283.49 68.87	107.5 -5.6	.L...-/	-3	W100V 2.8	E1 *K	5V5	1.15 .038	.31 .029	1.07 1.10	
I3258	12 21.20 5.10	12 45.3 -33.1	277.70 73.98	102.3 -4.0	.SBS9**	9	P048C 1.9			1.21 .043	.05 .039	1.20 1.21	
I3259	12 21.27 5.12	7 28.0 -33.1	283.49 69.01	107.4 -5.5	.SX58*.	8	N061C 2.7			1.25 .048	.22 .035	1.20 1.21	
N4348	12 21.33 5.17	-3 11.0 -33.1	289.61 58.71	117.7 -8.4	.S...3*/ S 3	3*	P048C 4*			1.54 .050	.52 .040	1.51 1.44	
N4363	12 21.34 4.31	75 13.8 -33.1	125.38 42.04	41.8 13.1	.SA.3*.	3	P048C 1.9			1.17 .183	.00 .120	1.17 1.20	
I3260	12 21.35 5.12	7 23.2 -33.1	283.61 68.94	107.5 -5.5	.LX50*/	-2	N061C 2.5	E4 K		1.27 .048	.41 .037	1.18 1.21	
N4350	12 21.44 5.08	16 58.3 -33.1	270.18 77.78	98.3 -2.7	.LA.../	-2	W060V 2.9	D GK	4V5	1.50 .033	.44 .028	1.60 1.43	
N4353	12 21.46 5.12	8 3.7 -33.1	283.11 69.59	106.8 -5.3	.IB.9*.	10	P048C 1.6			1.11 .129	.18 .079	1.07 1.08	
N4351	12 21.49 5.10	12 28.9 -33.1	278.31 73.75	102.6 -4.0	.SBT2**	2	P048C 2.0			1.31 .036	.15 .032	1.28 1.30	
I3267	12 21.55 5.12	7 19.2 -33.1	283.79 68.89	107.5 -5.5	.SA56..	6	N061C 2.5			1.04 .039	.01 .030	1.04 1.06	
N4352	12 21.55 5.11	11 29.7 -33.1	279.63 72.84	103.5 -4.3	.LA...*/	-2	P048C 1.8			1.29 .049	.34 .048	1.21 1.24	0.70 .07
I3268	12 21.6 5.13	6 53 -33.1	284.18 68.48	108.0 -5.6	.P.....		P048N 1.4			.91 .039	.02 .038	.90 .92	
N4357	12 21.6 4.89	49 3 -33.1	134.90 67.61	67.6 6.8	.SA.4..	4	P048N 2.7			1.58 .039	.40 .038	1.49 1.51	
A1221+00 D121	12 21.63 5.15	0 50.7 -33.1	287.98 62.65	113.8 -7.3	.I...9..	10	P048F 1.7			1.09 .061	.08 .058	1.07 1.08	
A1221+04 MK 51	12 21.69 5.14	4 30.3 -33.1	285.93 66.20	110.3 -6.2	.E+.4..	-5*	P048C 1.4			1.17 .075	.48 .100	1.06 1.09	
N4359	12 21.70 5.01	31 47.9 -33.1	174.81 82.62	84.1 1.8	.SBT5*/	5	P048C 2.1			1.55 .037	.53 .035	1.42 1.44	
N4360	12 21.8 5.11	9 35.4 -33.1	281.96 71.05	105.4 -4.8	.E+2... E 2	-5	P048N 1.9			1.23 .071	.10 .071	1.21 1.24	
N4365	12 21.93 5.12	7 35.7 -33.1	283.82 69.18	107.3 -5.3	.E+3... E 2	-5	P200V 4.9	E4 K E4 K	3	1.79 .036	.13 .028	1.76 1.79	1.25 .05
A1221+67 MK206	12 21.98 4.59	67 43.0 -33.1	126.94 49.48	49.3 11.6						.83 .071	.16 .071	.79 1.39	
N4369 MK439	12 22.13 4.96	39 39.6 -33.1	145.75 76.53	76.6 4.2	RSAT1.. S 0	1	W100V 3.6	S P*AF* D G		1.39 .035	.01 .031	1.39 1.41	
A1222+70 D122	12 22.17 4.49	70 36.5 -33.1	126.24 46.62	46.4 12.2	.SA.9.. S	9	P048N 2.6			1.52 .039	.00 .038	1.52 1.54	
N4386	12 22.36 4.24	75 48.3 -33.1	125.18 41.48	41.2 13.3	.LX.-*. S 0*	-3*	P048C 2.3	D GK		1.48 .045	.26 .035	1.42 1.47	
N4370	12 22.37 5.12	7 43.3 -33.1	284.01 69.36	107.2 -5.2	.S...1./	1	N061C 2.6			1.21 .036	.25 .036	1.18 1.19	
N4371	12 22.38 5.10	11 58.8 -33.1	279.68 73.37	103.1 -3.9	.LBR... S80	-1	P200V 4.4	B K	3	1.59 .045	.20 .032	1.54 1.56	
N4375	12 22.51 5.02	28 50.1 -33.1	197.66 83.99	87.0 1.1	.SBR2P*	2	P048C 1.9			1.21 .038	.07 .035	1.20 1.22	
I3290	12 22.52 5.36	-39 29.7 -33.1	297.47 22.82	154.1 -15.6	PS850..	0	P048C 1.4		3	1.25 .158	.34 .085	1.17 1.22	
N4374	12 22.52 5.10	13 9.8 -33.1	278.21 74.48	102.0 -3.5	.E.1... E 1	-5	P200V 4.8	E2P E1 K	3	1.70 .035	.06 .023	1.69 1.72	1.25 .02
N4373	12 22.67 5.36	-39 28.7 -33.1	297.50 22.84	154.1 -15.6	.LA.0*.	-2*	P048C 2.1		3	1.51 .224	.15 .112	1.47 1.53	0.95 .04
N4377	12 22.68 5.09	15 2.4 -33.1	275.35 76.21	100.2 -3.0	.LA.-..	-3	W060V E 1	D K D K	4 S	1.26 .046	.08 .038	1.24 1.27	
I3303	12 22.71 5.10	12 59.5 -33.1	278.61 74.34	102.2 -3.6	.E.1.*.	-5	P048C 1.7			1.14 .050	.19 .050	1.09 1.12	
N4379	12 22.72 5.09	15 53.0 -33.1	273.79 76.97	99.4 -2.7	.L...-P*	-3	P048C E 1	D K D K		1.32 .040	.06 .038	1.30 1.33	
N4378	12 22.75 5.13	5 12.1 -33.1	286.12 66.94	109.7 -5.8	RSAS1.. S N.	1	W100V 3.8	SD *GK S K	D4 S	1.52 .031	.03 .025	1.51 1.53	
N4373A	12 22.8 5.35	-39 2 -33.1	297.47 23.29	153.7 -15.5	.S...05/	0*	S030C 1.6			1.42 .183	.52 .091	1.30 1.35	
N4384 MK207	12 22.80 4.81	54 46.9 -33.1	131.12 62.20	62.1 8.5	.S...1P.	1	P048N 1.9			1.19 .039	.10 .038	1.17 1.20	
N4380	12 22.83 5.11	10 17.6 -33.1	281.95 71.82	104.8 -4.3	.SAT3* S N.	3*	W060V 3.3	SD FG	3V5	1.57 .032	.22 .026	1.51 1.53	
N4382	12 22.88 5.07	18 28.0 -33.1	267.73 79.21	96.9 -1.9	.LAS.P. E 1	-1	P200V 5.0	D GK D GK	D5	1.85 .134	.13 .020	1.82 1.84	1.30 .05
N4383	12 22.90 5.08	16 44.8 -33.1	272.13 77.76	98.6 -2.4	.S...1SP	1*	P048C E P			1.34 .034	.26 .025	1.28 1.30	
N4391	12 23.01 4.63	65 12.7 -33.1	127.42 51.97	51.8 11.1	.LA.-..	-3	P048C 1.9	I P K *		1.16 .042	.00 .045	1.16 1.20	
N4389	12 23.14 4.90	45 57.7 -33.1	136.74 70.74	76.6 6.2	.SBT4P*	4	P048C S86	RIP*AF I P A *		1.43 .038	.24 .030	1.38 1.40	
N4385 MK 52	12 23.15 5.15	0 51.0 -33.1	288.79 62.74	113.9 -6.9	.LBT.*. S82	-1*	W060V 2.9	B *FG RS G	4 4V5	1.36 .038	.19 .034	1.32 1.35	0.90 .05

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N4328		14.25 .09	14.1 14.9	.19	0.80 .04	0.16 .06	0.81 .03	0.20 .04							-67	
N4333				.20											-109	
A1220+02				.21										7034 0 1 105	6911 -123	
N4334				.20											-103	
N4339	12.6 12.26	12.35 .06	12.6 14.2	.20 12.13	0.92 .03	0.50 .04	0.91 .03	0.55 .03	.86 .46					1278 0 1 100	1169 -109	
N4346	12.4 12.19			.21											72	
N4340	13.0 12.19	12.015 .10	13.8 14.7	.19 .37	.98 .06										-63	P
I3253	12.3 12.23		13.9	.19											-237	
N4344				.20	1.02 .07										-59	
N4343		13.29 .11	14.1	.20											-105	T
I3256	12.8 13.21	13.54 .11	13.4	.20 13.27	.98 .07				.91					714 0 1 50	609 -105	T
I3258				.19											-517	P
I3259		14.35 .11	14.9	.20	.76 .07									0 1 30	-82	T
N4348	13.1 12.89		14.1	.22	.07	*									-104	
N4363				.32											-146	
I3260		14.23 .11	14.4	.20	.97 .07										181	
N4350	12.0 12.04	11.90 .09	13.2	.19 11.52	0.89 .04		*		.80					1184 0 1 60	-104 1121	T
N4353				.20											-63	
N4351		12.8 .2	13.8	.19 12.47	0.39 .03		*		.30						-101	P
I3267		14.23 .11	14.3	.20	.78 .07									2388 0 1 150	2305 -83	T
N4352		13.55 .09	12.5 14.0	.20	0.90 .04	0.41 .04	0.91 .04	0.44 .04							-104	
I3268				.20											-87	
N4357				.21										764 0 1 150	658 -106	P
A1221+00				.21											80	
A1221+04		*		.20	*	*									-131	
N4359				.19										945 0 1 95	829 -116	
N4360		*		.20	*	*									3	
N4365	11.0 10.34	10.615 .14	12.4 14.2	.20 10.39	*	*	0.96 .03	0.56 .04							-95	
A1221+67		15.4 .15		.27	.62 .06	-.26 .07								1177 0 2 28	1074 -103	
N4369	12.4 12.28		14.1	.20										976 0 1 220	1131 155	
A1222+70				.29										1027 0 3 61	1066 39	
N4386	12.8 12.39		14.0	.32								.93 1 .01		471 1 0 10	637 166	
N4370				.20										1682 0 1 61	1865 183	
N4371	12.1 11.74	11.89 .11	14.2	.19 11.57	1.01 .07				.93					982 0 1 38	-102 898	P
N4375				.19										9087 0 2 70	-84 9078	PT
I3290				.44											-9	S
N4374	10.9 10.43	10.315 .04	12.0 13.6	.19 10.11	0.97 .02	0.58 .03	0.99 .01	0.60 .02	.92 .54	1.78 19 819	.59	1.11 1 .01	2.05 3.68	3342 0 1 44	3097 -245	T
N4373	12.2 11.94	12.10 .09	12.3 14.1	.44 11.55	1.05 .03	0.52 .06	1.07 .03	0.56 .06	.91 .42					854 3417	-79 3172	ST
N4377	12.9 12.80	12.65 .07	13.6	.19 12.42	0.88 .03	0.38 .03	*	*	.82 .34					0 1 18	-245 1281	T
32 65 I3303				.19										1352 0 1 105	-71	
N4379	13.0 12.72	12.5 .15	13.8	.19	.97 .06										-80	
N4378	12.8 12.28		14.7	.20											-67	P
N4373A				.43											-112	PT
N4384				.23											-244	
N4380	12.8 12.38		14.5	.20										2423 0 1 220	2528 105	
N4382	10.5 10.01	10.105 .07	12.1 13.9	.19 9.82	0.88 .04	*	0.90 .03	0.51 .03	.81					773 0 1 30	718 -55	PST
N4383	12.9 12.98		13.9	.19											-63	
N4391 72454				.26											146	
N4389	12.8 12.69		14.1	.21											67	
N4385	12.9 12.77	13.05 .13	13.0 14.2	.21 12.69	0.70 .05	0.00 .06	0.64 .03	-.15 .03	.60 -.05					2145 0 1 95	2015 -130	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log(DO) Log Do (13)	Log A _e m.e. (14)
I3322A	12 23.16	7 29.5	284.72	107.5	.SB56*/	6	N061C			1.55	.81	1.36	
	5.12	-33.1	69.17	-5.0			2.7			.036	.033	1.38	
N4387	12 23.16	13 5.3	278.85	102.1	.E.5...	-5	P048C		3	1.27	.21	1.22	0.70
	5.10	-33.1	74.47	-3.4			1.9			.038	.034	1.25	.05
N438A	12 23.24	12 56.3	279.13	102.3	.SAS3*/	3*	T052V		1	1.71	.56	1.58	
	5.10	-33.1	74.33	-3.4	S 3 N		3.1	SD GK*		.027	.020	1.60	
A1223+15	12 23.3	15 13	275.60	100.1									
	5.09	-33.1	76.43	-2.8									
N4393	12 23.3	27 50	207.17	88.0	.SX.7..	7	P048N			1.52	.03	1.51	
	5.02	-33.1	84.29	1.0			2.6			.039	.038	1.52	
N4390	12 23.31	10 44.1	281.85	104.4	.SXS4*.	4	P048C			1.26	.10	1.24	
	5.11	-33.0	72.27	-4.1						.037	.035	1.26	
N4395	12 23.33	33 49.5	162.10	82.3	.SAS9*.	9	W060V	S A		2.11	.07	2.09	
	4.99	-33.1	81.53	2.7	S 7	8	4.5	S A		.026	.019	2.10	
I3322	12 23.36	7 49.9	284.59	107.2	.SXS6*/	6	N061C			1.40	.63	1.25	
	5.12	-33.0	69.51	-4.9			2.6			.036	.033	1.27	
N4394	12 23.41	18 29.4	268.23	97.0	RSBR3..	3	P200V	R G	3	1.59	.04	1.59	1.15
	5.07	-33.0	79.32	-1.8	S82	3	4.6	R G	5	.024	.019	1.61	.05
I3330	12 23.44	31 7.2	177.76	84.9	.SXR2*.	2	P048C			1.13	.30	1.06	
	5.00	-33.0	83.30	2.0			1.5			.039	.038	1.08	
N4396	12 23.46	15 56.8	274.37	99.4	.SA.7*/	7	P048C			1.55	.47	1.44	
	5.08	-33.0	77.11	-2.5			2.2			.036	.033	1.45	
N4405	12 23.59	16 27.5	273.45	98.9	.SAT0*.	0	P048C			1.30	.16	1.26	
	5.08	-33.0	77.58	-2.3			2.0			.037	.034	1.28	
N4402	12 23.60	13 23.4	278.80	101.9	.S..3./	3	P048C			1.61	.49	1.49	1.28
	5.09	-33.0	74.79	-3.2			2.3			.029	.021	1.51	.03
N4406	12 23.66	13 13.4	279.09	102.0	.E.3...	-5	P200V	E2 K	3	1.87	.13	1.84	1.37
	5.10	-33.0	74.64	-3.3	E 3		5.0			.034	.024	1.87	.03
A1223+58 D123	12 23.77	58 35.8	129.30	58.3	.IB.9..	10	P048N	E2 K		1.43	.12	1.40	
	4.74	-33.0	58.49	9.6		8	2.3			.046	.045	1.41	
A1223+48 MK209	12 23.84	48 46.1	134.16	67.9						.94	.05	.93	
	5.11	-33.0	68.08	7.1						.050	.050		
N4410.	12 23.94	9 17.8	283.74	105.8						1.10	.18	1.06	
	5.11	-33.0	70.96	-4.3						.038	.036		
N4410A	12 23.93	9 17.8	283.73	105.8	.S..2SP	25	P048C						
	5.11	-33.0	70.95	-4.3									
N4410B	12 23.95	9 17.8	283.74	105.8	.L...SP	-25	P048C						
	5.11	-33.0	70.96	-4.3									
N4411A	12 23.96	9 18.9	283.87	106.0	.S8T8..	8	P048C			1.35	.04	1.34	
	5.11	-33.0	70.81	-4.4			2.2			.039	.032	1.35	
N4414	12 23.95	31 29.9	174.57	84.6	.SAT5..	5	W100V	S FG	2	1.56	.22	1.51	1.10
	5.00	-33.0	83.18	2.2	S 5 NK	3*	3.7	SD F	03	.034	.026	1.53	.05
N4373B	12 24.0	-38 51	297.70	153.5	.SB.7*.	7*	S030C			1.11	.04	1.10	
	5.36	-33.0	23.49	-15.2			1.3			.158	.105	1.12	
N4413	12 24.00	12 53.3	279.83	102.4	PSBT3*.	3	P048C		2	1.39	.17	1.35	
	5.10	-33.0	74.36	-3.3			2.2			.036	.032	1.37	
N4412	12 24.05	4 14.4	287.50	110.7	.SBR3SP	3	W100V	RS *A		1.18	.04	1.17	
	5.14	-33.0	66.09	-5.7	SX P		3.1	IS AF	3 S	.034	.028	1.19	
N4415	12 24.1	8 42	284.38	106.4	.S...0..	0	P048N			1.17	.03	1.17	
	5.12	-33.0	70.40	-4.5			1.9			.039	.038	1.19	
N4411B	12 24.25	9 9.7	284.08	106.0	.SXT8..	8	P048C			1.43	.00	1.43	
	5.11	-33.0	70.85	-4.3			2.4			.039	.032	1.44	
N4417	12 24.30	9 51.7	283.47	105.3	.LB..*/	-2	P048C		3	1.56	.40	1.47	0.80
	5.11	-33.0	71.52	-4.1	E 7		2.3	D K	2	.031	.026	1.50	.04
I3355	12 24.30	13 27.2	279.32	101.8	.I...9..	10	P048N			1.12	.35	1.03	
	5.09	-33.0	74.91	-3.1	I	8	1.5			.039	.038	1.04	
N4420	12 24.42	2 46.3	288.53	112.1	.SBR4*.	4*	W100V	SI *A	1	1.35	.28	1.29	
	5.14	-33.0	64.68	-5.1	S 5 K	5*	3.2	S F *	1	.033	.027	1.31	
N4419	12 24.42	5 19.4	276.46	100.1	.SBS1./	1	W060V	S G		1.53	.43	1.43	0.90
	5.08	-33.0	76.64	-2.5	E P		3.0	SD GK		.032	.026	1.45	.06
N4421	12 24.52	15 44.3	275.80	99.7	.SBS0..	0	P048C		34	1.43	.08	1.42	1.00
	5.08	-33.0	77.03	-2.3			2.4			.044	.040	1.44	.03
A1224+48	12 24.52	48 33.1	134.02	68.2	.SB....		P048N			1.05	.02	1.05	
	4.86	-33.0	68.32	7.1			1.7			.039	.038		
A1224+37	12 24.60	37 25.1	148.62	78.9	.IB.9..	10	P048N			1.63	.16	1.59	
	4.96	-33.0	78.74	4.0	I	9	2.7			.100	.100	1.60	
N4424	12 24.66	9 41.8	283.90	105.5	.SBS1*.	1	P048C		3	1.57	.29	1.51	*
	5.11	-33.0	71.39	-4.0	S 3 N	5*	2.4	IS G		.028	.026	1.53	
N4425	12 24.69	13 0.7	280.26	102.3	.LB..*/	-2	P048C		3	1.53	.44	1.42	*
	5.09	-33.0	74.53	-3.1	S 2	5*	2.2			.035	.025	1.45	
N4430	12 24.9	6 32	284.58	108.5	.SRT3*P	3	P048N			1.43	.05	1.42	
	5.12	-33.0	68.36	-4.9			2.4			.039	.038	1.44	
N4428	12 24.90	-7 53.5	292.76	122.5	.SXT5..	5	P200V			1.29	.32	1.21	
	5.19	-33.0	54.23	-8.8	S 5 K	5*	3.7			.044	.033	1.23	
N4429	12 24.90	11 23.1	282.38	103.9	.LAR...*	-1	P200V	SDP*FG	3	1.74	.33	1.66	1.10
	5.10	-33.0	73.02	-3.5			4.6	D K	4	.038	.032	1.69	.04
N4431	12 24.92	12 34.1	281.02	102.7	.LAR...*	-2	P048C		1	1.30	.18	1.26	
	5.10	-33.0	74.13	-3.2			2.0			.048	.042	1.29	
I3370	12 24.98	-39 3.4	297.93	153.8	.E.2*..	-5	S030V		3	1.45	.07	1.43	1.00
	5.37	-33.0	23.30	-15.1			2.1			.183	.095	1.50	.05
N4434	12 25.0	8 26	285.23	106.7	.E.0...	-5	P048N			1.20	.00	1.20	
	5.12	-33.0	70.20	-4.3			2.0			.071	.071	1.23	
N4441	12 25.06	65 4.5	127.11	52.0	.LX..P.	-1	P048C			1.67	.10	1.65	
	4.59	-33.0	52.13	11.3			2.8			.071	.071	1.68	
N4433	12 25.07	-8 0.2	292.86	122.7	.SXS2..	2	P200V		2	1.36	.32	1.28	
	5.19	-33.0	54.13	-8.8	S		3.8	S F		.043	.031	1.30	
N4435	12 25.14	13 21.4	280.18	102.0	.LB50..	-2	W100V	DB *K	3	1.47	.18	1.43	1.1
	5.09	-33.0	74.89	-2.9	E 4		3.6	DE K	4	.051	.030	1.46	.07
N4436	12 25.16	12 35.6	281.19	102.7	.L.....	-2	W100V		3	1.27	.32	1.19	
	5.09	-33.0	74.18	-3.1			3.0			.046	.042	1.22	
N4438	12 25.23	13 17.1	280.36	102.1	.SAS0P*	0	W100V	I P G *	3	1.97	.38	1.88	1.53
	5.09	-33.0	74.83	-2.9	S NT.		4.4	I GK	4VS	.025	.021	1.90	.03
A1225+43	12 25.23	43 46.3	137.77	72.8	.I...9..	10	P048N			1.60	.21	1.55	
	4.90	-33.0	72.94	5.9	I	8	2.6			.046	.045	1.56	
N4440	12 25.36	12 34.2	281.39	102.8	.S8T1..	1	W100V			1.30	.07	1.28	0.70
	5.09	-33.0	74.17	-3.1			3.3			.034	.029	1.30	.06
N4442	12 25.53	10 4.7	284.19	105.2	.LB50..	-2	W060V	D *K	3	1.66	.37	1.58	0.90
	5.11	-33.0	71.82	-3.7	E 5P		3.3	D K	04	.033	.025	1.61	.04
I0794	12 25.61	12 22.2	281.84	103.0	.LB..*.	-3	P048C			1.23	.14	1.20	
	5.09	-33.0	74.00	-3.1			1.9			.071	.071	1.23	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _e (U-B) _e (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)	
I 3322A				.20												
N4387		12.95	11.9	.19	0.94	0.56	0.97	0.61	.89					511	-103	
N4388	12.2	11.83	13.8	12.75	.03	.04	.03	.04	.52					0 1 65	432	
A1223+15	11.95	.11	13.8	11.17	.78	.07			.62					2614	-79	PT
N4393				.19										0 1 19	2535	
N4390				.20										0 1 30	-70	
N4395	11.4*	10.69	15.9	10.44	.56				.48					294	-89	P
I 3322	10.33	.11		.20	.07									0 1 36	307	T
N4394	12.2	11.745	13.0	11.51	0.82	0.25	0.90	0.33	.76					772	-101	PT
I 3330	11.70	.07	14.4	.19	.03	.05	.03	.05	.20					0 1 150	-55	
N4396				.19											1	
N4405				.19											-66	
N4402		12.50	14.4	.19	0.83	0.06	0.85	0.16							-64	PT
N4406	10.9	10.115	12.4	.19	.03	.05	.03	.05						-341	-77	
A1223+58	10.09	.05	14.1	9.93	.02	.04	.02	.02	.47			1.18		0 2 35	-419	PT
				.24								1.01		725	-78	
A1223+48		14.5		.21	.17	-.38								1 0 10	846	
I 7 36		.15		.20	.06	.07								287*	367	
N4410.				.20										0 2 43	80	
N4410A				.20										7220	7125	
N4410B				.20										0 1 150	-95	PST
N4411A		13.55	15.0	.20	.72										-95	PT
		.11		.20	.07										-95	T
N4414	11.1	10.95	11.9	.19	0.69		0.78	.60		1.38*	.705		2.575	715	718	PS
N4373B	11.26	.08	13.0	10.58	.03		.06			2 1 0				0 1 100	3	
N4413				.19											-243	
N4412	12.8			.20											-79	
N4415	13.07		13.7	.20											-115	
				.20											-97	
N4411B		13.02	15.0	.20	.64											T
		.11		.20	.07										-95	
N4417	12.3	12.00	11.5	.20	0.89	0.52	0.96	0.58								T
	12.08	.07	13.7	.19	.03	.04	.03	.03							-92	
I 3355				.21											-77	
N4420	12.5			.21											-121	
	12.71		13.6	.19	1.00		1.03	.05							-68	
N4419	12.2	11.95	11.9	.19	.04		.05									
	12.23	.13	13.4													
N4421		12.45	12.9	.19	0.87	0.40	0.88	0.44	.80					1692	1626	
A1224+48		.08	14.2	12.18	.02	.03	.02	.02	.36					0 1 250	-66	S
A1224+37				.19								1.06		4652	4731	
N4424	12.6	12.285		.20	0.70		*	.60				1.01		0 1 60	79	
	12.27	.07	14.3	11.84	.04									223	253	
N4425	13.1	12.8		.19	0.97		*	.87						10 10	30	ST
	12.72	.1	14.2	12.41	.04									0 1 150	-92	T
N4430				.20										1883	1805	
N4428	13.1	*		.23	*	*								0 1 50	-78	
N4429	13.32		13.8	.20	*	*									-106	P
N4431	11.7	11.10	12.1	.20	0.94	0.54	0.97	0.58	.84					1114	-161	PT
	11.24	.08	13.8	10.69	.04	.06	.03	.03	.45					0 1 65	1029	
I 3370	12.4	12.10	12.6	.43	1.03	0.44	1.04	0.47	.91						-80	T
	12.02	.08	14.2	11.63	.04	.06	.03	.04	.35					2933	2690	
N4434				.20										0 1 24	-243	
N4441				.26											-98	
N4433	12.9	*		.23	*	*				1.40*				2907	146	PT
	13.01		13.9	.19	0.92	0.48	0.94	0.53	.85	0 1 1	.355			0 2 24	2746	
N4435	11.8	11.7	12.7	.19	.03	.06	.02	.03	.43					869	793	PT
V188	11.78	.1	13.5	11.42	.91	.35								0 1 100	-76	
N4436		14.4	14.8	.19	.06	.07									-80	
N4438	11.9	10.855	14.0	.19	0.83	*	0.87	0.45	.72	1.48*	.685		2.545	259*	182	PT
V188	10.97	.06	14.6	10.39	.02		.02	.04		1 1 4	1.15*			0 2 28	77	
A1225+43				.20								1.10		1 0 10	258	
N4440		12.75	11.7	.19	0.96		0.99								59*	
		.09	13.9	.20	.02	.05									-80	
N4442	11.4	11.295	11.3	.20	0.92	0.55	0.95	0.60	.84					0 1 580	490	T
	11.23	.07	13.5	10.93	.03	.06	.03	.03	.47					0 1 100	-90	
I 0794				.19											-80	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (I) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log Do (12)	Log A _e m.e. (13)
13381	12 25.72	12 4.0	282.29	103.3	.LA..*	-3	P048C			1.16	.11	1.13	
	5.10	-33.0	73.73	-3.1			1.8			.051	.058	1.16	
N4445	12 25.73	9 42.8	284.67	105.5	.S..2*/	2*	P048C			1.45	.65	1.30	*
	5.11	-33.0	71.48	-3.8			1.8			.036	.029	1.32	
N4448	12 25.76	28 53.8	195.36	87.2	.SBR2..	2	W100V	SD *G	3*	1.60	.39	1.51	
	5.00	-33.0	84.66	1.8	S 2	4	3.6	SD K	D3	.030	.023	1.53	
N4449	12 25.78	44 22.3	136.84	72.3	.IB.9..	10	W100V	I A		1.71	.14	1.68	1.29
	4.89	-33.0	72.40	6.2	I	5	4.1	I A	2	.028	.020	1.69	.03
A1225+44. MK212	12 25.80	44 43.7	136.49	72.0						1.10	.11	1.08	
	4.89	-33.0	72.06	6.3						.050	.050		
N4450	12 25.97	17 21.7	273.92	98.2	.SAS2..	2	W100V	S G		1.68	.14	1.65	1.25
	5.07	-33.0	78.64	-1.5	S 3 N		4.0	S G	04 S	.026	.021	1.67	.04
A1226+37 D127	12 26.02	37 30.6	147.12	78.9	.S..9..	9	P048N			1.32	.26	1.26	
	4.94	-33.0	78.79	4.3			9			.039	.038	1.27	
N4451	12 26.14	9 32.1	285.13	105.7	.LA..*	-2	P048C			1.17	.15	1.14	*
	5.11	-33.0	71.34	-3.7			1.8			.050	.050	1.17	
13393	12 26.16	13 11.5	281.29	102.2	.L...*	-1*	P048C			1.13	.41	1.03	
	5.09	-33.0	74.82	-2.7			1.4			.075	.100	1.05	
N4452	12 26.19	12 1.9	282.71	103.3	.S..1S/	1S	P048C			1.38	.58	1.24	0.65
	5.10	-33.0	73.73	-3.0	S		1.8			.036	.032	1.26	.06
13392	12 26.19	15 16.5	278.25	100.2	.SA.3*	3	P048C			1.37	.33	1.29	
	5.08	-33.0	76.77	-2.1			2.0			.037	.034	1.31	
N4453	12 26.2	6 47	287.26	108.4						.79	.33	.72	
	5.12	-33.0	68.69	-4.5						.075	.100		
N4455	12 26.23	23 6.0	251.63	92.8	.SBS7S/	7	P048C			1.45	.43	1.34	
	5.04	-33.0	83.29	.2	S 7	7*	2.0	I A		.042	.035	1.35	
N4454	12 26.27	-1 39.8	291.44	116.6	RSBR0..	0	W100V			1.34	.07	1.36	*
	5.16	-33.0	60.43	-6.8	S 4	4*	3.4			.037	.030	1.36	
A1226+43 D129	12 26.30	43 30.0	137.43	73.2	.I..9..	10	P048N	D *G	3VS	1.52	.02	1.52	
	4.89	-33.0	73.26	6.0	I	9	2.6			.046	.045	1.53	
N4460	12 26.34	45 8.3	135.82	71.6	.LBS.S/	-1S	W060V	D *FG*		1.64	.50	1.52	
	4.88	-33.0	71.70	6.5	E 8		3.1	DEP GK	1	.042	.030	1.55	
N4457	12 26.43	3 50.8	289.14	111.2	RSXS0..	0	W100V	S G	3	1.48	.08	1.39	0.80
	5.14	-33.0	65.84	-5.3			4.0	S K		.037	.029	1.48	.03
N4458	12 26.43	13 31.1	281.10	101.9	.E.0..	-5	W100V	SDP K	3	1.27	.02	1.26	0.85
	5.09	-33.0	75.15	-2.5			3.3			.060	.044	1.29	.05
A1226+02 D128	12 26.48	2 59.9	289.60	112.1	.SBR.9*	9	P048N			1.34	.26	1.28	
	5.14	-33.0	65.01	-5.5	P	9	2.0	F P*	3	.046	.045	1.29	
N4459	12 26.48	14 15.3	280.12	101.2	.LAR...*	-1	W100V	E3 K	4 S	1.58	.13	1.55	1.00
	5.08	-33.0	75.85	-2.3	E 2		3.8			.040	.036	1.57	.04
N4461	12 26.52	13 27.7	281.26	102.0	.LBS...*	-1*	W100V	D GK	13	1.57	.38	1.49	*
	5.09	-33.0	75.11	-2.5	S 0		3.6	D K	04VS	.033	.028	1.51	
A1226+11	12 26.7	11 58	283.21	103.4									
	5.09	-33.0	73.71	-2.9									
N4462	12 26.73	-22 53.4	296.36	137.5	.SBR2..	2	W100V			1.57	.36	1.49	
	5.27	-33.0	39.42	-11.8	S 3	5*	3.6	S *G *	4	.045	.034	1.52	
N4464	12 26.82	8 26.1	286.52	106.8	.S..0S.	0S	P048C			1.06	.10	1.04	
	5.11	-33.0	70.32	-3.9			1.9			.037	.035	1.06	
13413	12 26.84	11 42.6	283.60	103.7	.E.4.S.	-5S	P048C			1.21	.19	1.17	
	5.10	-33.0	73.47	-3.0			1.8			.051	.058	1.20	
13414	12 26.9	7 3	287.55	108.2	.SX.8S.	8S	P048N			1.23	.20	1.18	
	5.12	-33.0	68.99	-4.3			1.8			.039	.038	1.19	
N4469	12 26.93	9 1.6	286.14	106.3	.SBS0S/	0	W100V	DS *FG*	3	1.59	.42	1.49	
	5.11	-33.0	70.90	-3.7	S P		3.6	D G	4	.031	.024	1.51	
N4467	12 26.96	8 16.2	286.74	107.0	.E.2...*	-5	P048C			.85	.08	.83	
	5.11	-33.0	70.17	-3.9			1.2			.040	.040	.86	
N4466	12 26.97	7 58.4	286.96	107.3	.S..2S/	2S	P048C			1.14	.46	1.04	
	5.11	-33.0	69.99	-4.0			1.4			.036	.034	1.06	
N4468	12 26.99	14 19.5	280.50	101.2	.LA..*	-2	P048C			1.18	.12	1.15	*
	5.08	-33.0	75.96	-2.2			1.8			.048	.045	1.18	
N4470	12 27.09	8 6.0	286.96	107.2	.S..1S.	1S	P048C			1.18	.12	1.15	
	5.11	-33.0	70.02	-3.9			1.8			.036	.032	1.17	
13418	12 27.18	11 40.8	283.91	103.8	.IB.9*	10	P048C			1.17	.18	1.12	
	5.10	-33.0	73.47	-2.9			1.7			.046	.045	1.13	
N4472	12 27.24	8 16.7	286.93	107.0	.E.2...*	-5	P200V	F2 K	3	1.95	.08	1.93	1.52
	5.11	-33.0	70.20	-3.8	E 4	0	5.0	F2 K		.033	.022	1.96	.05
N4473	12 27.28	13 42.4	281.62	101.8	.E.5...*	-5	W100V	E4 K	3	1.65	.24	1.59	1.08
	5.08	-33.0	75.40	-2.3	E 4		3.9	E5 K		.039	.033	1.62	.03
N4475	12 27.3	27 32	210.17	88.6	.SA.4..	4	P048N			1.32	.24	1.27	
	5.01	-33.0	85.19	1.7			2.0			.039	.038	1.29	
N4474	12 27.37	14 20.7	280.82	101.2	.L...P*	-2	P048C			1.37	.28	1.31	
	5.08	-33.0	76.01	-2.1	E 6		2.0	n K		.038	.032	1.34	
N4476	12 27.46	12 37.5	283.11	102.9	.LAR...*	-3	P200V		23	1.28	.17	1.24	0.70
	5.09	-33.0	74.39	-2.6	E 4		3.8		4	.043	.034	1.27	.04
N4477	12 27.51	13 54.7	281.56	101.6	.LBS.*S	-2*	W100V		3	1.60	.05	1.59	1.10
	5.08	-33.0	75.61	-2.2	SX0		4.0	BD K		.031	.030	1.62	.04
N4478	12 27.76	12 36.3	283.39	102.9	.E.2...*	-5	P200V		3	1.31	.06	1.30	0.70
	5.09	-33.0	74.39	-2.5	E 1		4.0	F2 *K		.054	.038	1.33	.05
N4479	12 27.78	13 51.2	281.88	101.7	.LBS0S*	-2*	W100V			1.26	.09	1.24	0.80
	5.08	-33.0	75.58	-2.1			3.2			.049	.046	1.27	.04
N4480	12 27.89	4 31.3	289.67	110.7	.SX5S..	5	P048C	S *F		1.42	.26	1.36	
	5.13	-33.0	66.57	-4.7			2.2			.036	.029	1.38	
N4486B	12 28.00	12 46.0	283.42	102.8	CE.0...*	-6	P200V		3	.68	.03	.67	
	5.09	-33.0	74.56	-2.4			2.7			.042	.045	.70	
N4485	12 28.08	41 58.5	138.00	74.7	.IRS9P.	10	W100V			1.38	.14	1.35	*
	4.89	-33.0	74.81	5.9	I	6*	3.4	I A *		.031	.021	1.36	
N4483	12 28.14	9 17.5	286.82	106.1	.SBS0*	0	P048C			1.25	.22	1.20	
	5.11	-33.0	71.23	-3.3	SX0*		1.9			.037	.034	1.22	
N4490	12 28.16	41 54.9	138.02	74.8	.SBS7P.	7	W100V	I AF	2	1.77	.28	1.71	1.2
	4.89	-33.0	74.87	5.9	S 5 NT *	5	4.1	I A		.025	.018	1.72	.07
N4486	12 28.29	12 40.1	283.78	102.9	.E.0+P.	-4	P200V	E1 K	3	1.86	.03	1.86	1.50
	5.09	-33.0	74.49	-2.3	E 1		5.0	E1 K		.031	.023	1.89	.03
A1228+12	12 28.3	12 19	284.18	103.2									
	5.09	-33.0	74.16	-2.4									
N4489	12 28.3	17 2	277.18	98.7	.E.1...*	-5	P048N			1.34	.02	1.33	
	5.06	-33.0	78.58	-1.1			2.2			.051	.058	1.36	
N4488	12 28.32	8 38.2	287.44	106.8	.SBS0P*	0	P048C			1.56	.37	1.48	
	5.11	-33.0	70.61	-3.5			2.3			.042	.037	1.50	
N4491	12 28.42	11 45.6	284.86	103.8	.SBS1*	1	P048C		2	1.28	.27	1.22	
	5.09	-33.0	73.63	-2.6			1.9			.037	.035	1.24	

[illegible]

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log A _g m.e. (13)	
N4492	12 28.45	8 21.3	287.74	107.0	.SAS1\$.	1	P048C			1.31	.03	1.30		
	5.11	-33.0	70.34	-3.5			2.2			.043	.040	1.32		
N4487	12 28.49	-7 46.7	294.24	122.6	.SXT6..	6	W100V			1.61	.13	1.58		
	5.20	-33.0	54.47	-7.9	S 5	4	3.9	S F	4VS	.035	.025	1.60		
I3442	12 28.81	14 29.5	282.12	101.3	.E.0.*.	-5*	1.9			1.18	.00	1.18		
	5.08	-33.0	76.17	-1.7			1.9			.073	.085	1.21		
N4494	12 28.91	26 3.1	228.60	90.1	.E.1...-	-5	P200V	DE *K	3	1.68	.10	1.65	1.15	
	5.01	-32.9	85.32	1.6	E 1	4.7		E2 K		.038	.031	1.68	.05	
I3453	12 29.0	15 8	281.25	100.6	.SB.85/	85	P048C			1.09	.47	.98		
	5.07	-32.9	76.88	-1.5			1.3			.039	.058	.99		
N4497	12 29.01	11 54.0	285.21	103.7	.SXS0*.	0	P048C		1	1.36	.30	1.29	0.85	
	5.09	-32.9	73.81	-2.4			2.0			.043	.040	1.31	.05	
N4500	12 29.05	58 14.4	128.10	58.9	.SBS1..	1	W060V			1.27	.16	1.24		
MK213	4.67	-32.9	58.96	10.2			2.7		5	.037	.033	1.27		
N4496A	12 29.11	4 12.9	290.57	111.1	.SBT9..	9	W060V	B *A		1.59	.10	1.56		
	5.13	-32.9	66.33	-4.5	SX5	5*	3.4	BS A		.035	.041	1.57		
N4496B	12 29.13	4 12.1	290.59	111.1	.IBS9*.	10	M082C	I *A		1.00	.06	.98		
	5.13	-32.9	66.32	-4.5			2.4	I A		.057	.037	.99		
N4498	12 29.14	17 7.8	277.92	98.7	.SXS6..	6	P048C			1.51	.14	1.45		
	5.06	-32.9	78.75	-9			2.4			.043	.039	1.46		
A1229+66C	12 29.27	66 2.3	126.21	51.1										
MK214	4.48	-32.9	51.24	11.9										
I3457	12 29.05	12 56.0	284.40	102.7	.E.3.*.	-5*	P048C			1.21	.13	1.18		
	5.08	-32.9	79.82	-2.0			1.3			.051	.058	1.21		
N4501	12 29.46	14 41.7	282.34	101.0	.SAT3..	3	W100V	S FG	3	1.84	.25	1.78	1.35	
	5.07	-32.9	76.51	-1.5	S 4	1	4.2	S G	3VS	.022	.018	1.80	.03	
A1229+29	12 29.48	29 59.1	180.73	86.4	.I.1..9.	10	P048N			1.20	.06	1.19		
D131	4.98	-32.9	85.00	2.9	I 9	1.9				.046	.045	1.20		
N4503	12 29.56	11 27.2	286.10	104.1	.LB.-*.	-3*	W060V	D *GK	3	1.55	.30	1.48	0.95	
	5.09	-32.9	73.41	-2.4	E 2*	3.2		D K	4 S	.042	.031	1.51	.04	
N4506	12 29.65	13 41.7	283.81	102.0	.S..1P\$	1	P048C			1.21	.11	1.19		
	5.08	-32.9	75.57	-1.7			1.9			.045	.042	1.21		
N4504	12 29.70	-7 17.3	294.64	122.2	.SAS6..	6	W100V			1.60	.16	1.56		
	5.19	-32.9	55.00	-7.5	S 5 N	4*	3.8	S F	3VS	.035	.023	1.58		
A1229+66B	12 29.8	66 40	126.00	50.5	.RING.8	10R	M082V			.71	.16	.67		
	4.45	-32.9	50.62	12.1			1.9			.050	.050	.68		
A1229+66A	12 29.46	66 40	125.97	50.5	.RING.A	-2R	M082V			.39	.04	.38		
	4.44	-32.9	50.5	12.1			1.4			.050	.050	.62		
N4517A	12 29.91	0 39.9	292.49	114.5	.SBT8*.	8*	W060V			1.62	.14	1.59		
	5.15	-32.9	62.88	-5.3	S	9	3.5	S AF		.034	.026	1.60		
A1230+09	12 30.02	9 26.9	288.11	106.1	.E.1...-	-5	P048C			.56	.00	.56		
	5.10	-32.9	71.50	-2.9			.7			.075	.100	.59		
I3474	12 30.06	2 56.3	291.71	112.4	.S..7./	7	P048C			1.35	.93	1.13		
	5.14	-32.9	65.12	-4.7			1.3			.050	.050	1.14		
I3475	12 30.16	13 2.9	285.02	102.6	.E.3.*.	-5*	P048C			1.41	.02	1.44	1.25	
D132	5.08	-32.9	74.99	-1.8	E 3	2.4				.051	.058	1.44	.06	
I3476	12 30.18	14 19.5	283.53	101.4	.IBS9*.	10	P048C			1.34	.06	1.33		
	5.07	-32.9	76.21	-1.4			2.2			.038	.037	1.34		
A1230+46	12 30.18	46 2.5	133.07	70.9						.58	.00	.58		
MK215	4.83	-32.9	70.99	7.4						.075	.100			
N4517	12 30.20	0 23.3	292.75	114.8	.SAS6*/	6	W060V	SI *AF	4	2.01	.73	1.84	*	
	5.15	-32.9	62.61	-5.3	S 5	3.7		SI *F *	1	.026	.018	1.86		
I3478	12 30.22	14 28.3	283.38	101.3	.LX...*	-2	P048C			1.10	.04	1.09		
	5.07	-32.9	76.35	-1.4			1.7			.071	.071	1.12		
I3481	12 30.35	11 41.0	286.55	104.0	.LX.-*P	-3	P200C			.82	.13	.79	*	
	5.09	-32.9	73.69	-2.1			2.6			.075	.100	.82		
A1230+37	12 30.4	37 54	142.2	78.8	.SB.6*.	6*	P048N			1.58	.51	1.46		
	4.91	-32.9	78.80	5.3			2.2			.039	.038	1.48		
I3481A	12 30.42	11 40.1	286.62	104.0	.E.1.*P	-5*	P200C			.35	.00	.35		
	5.09	-32.9	73.68	-2.1			1.8			.075	.100	.38		
A1230+31	12 30.42	31 48.9	164.33	84.7	.I..9..	10	P048N			1.76	.14	1.72		
D133	5.20	-32.9	84.02	3.6	I 9	3.0				.052	.050	1.73		
N4515	12 30.5	16 32	280.56	99.3	.L...*	-3*	P048N			1.20	.07	1.18		
	5.06	-32.9	78.32	-7			1.9			.050	.050	1.21		
N4516	12 30.61	14 51.0	283.26	100.9	.SBT2\$.	2	P048C			1.27	.23	1.22		
	5.07	-32.9	76.74	-1.2			1.9			.035	.032	1.24		
I3483	12 30.64	11 37.5	286.84	104.0	.SXS3*P	3	P200C		3	.67	.10	.65		
	5.09	-32.9	73.65	-2.1			2.4			.061	.058	.67		
N4509	12 30.65	32 22.1	160.57	84.1	.S..2P\$	2	P048C			1.04	.19	1.00		
	4.95	-32.9	83.64	3.8			1.5			.048	.045	1.02		
A1230+52	12 30.86	52 3.1	129.64	65.0										
MK216	4.75	-32.9	65.11	9.0										
N4519	12 30.96	8 55.8	289.17	106.7	.SBT7..	7	W100V	S AF	2	1.49	.14	1.46	*	
	5.10	-32.9	71.04	-2.8	S 5	5	3.6	S AF		.025	.021	1.47		
N4522	12 31.13	9 27.0	288.95	106.2	.SBS6*/	6	P048C			1.57	.51	1.45		
	5.10	-32.9	71.56	-2.6	S 5P	6	2.2	S *AF*		.033	.027	1.47		
I3499	12 31.2	11 16	287.62	104.4	.S..0..	0	P048N			1.21	.43	1.11	*	
	5.09	-32.9	73.33	-2.1			1.6			.039	.038	1.13		
A1231-02	12 31.20	-2 22.7	294.11	117.6	.I..9..	10	P048N			1.16	.02	1.15		
D134	5.17	-32.9	59.91	-5.8	I 9	1.9				.039	.038	1.16		
N4520	12 31.25	-7 6.1	295.27	122.2	.E.4.*.	-5*	P048C							
	5.20	-32.9	55.23	-7.1										
N4523	12 31.29	15 26.6	283.23	100.4	.SB58..	8	P048C			1.42	.02	1.41		
D135	5.06	-32.9	77.36	-9	S *	9*	2.4			.042	.036	1.42		
N4525	12 31.3	30 34	172.67	85.9	.S..6*.	6*	P048N			1.46	.25	1.40		
	4.96	-32.9	85.00	3.4			2.2			.039	.038	1.41		
I0800	12 31.43	15 37.8	283.01	100.3	.SBT4P\$	4*	P048C			1.22	.12	1.19		
	5.06	-32.9	77.54	-8			1.9			.036	.032	1.21		
N4526	12 31.51	7 58.5	290.17	107.6	.LXS0*.	-2	W060V	D G	3	1.86	.49	1.74	1.10	
	5.11	-32.9	70.14	-2.9	E 7	3.6		D K	03 S	.031	.024	1.77	.05	
N4528	12 31.57	11 35.8	287.65	104.1	.L...*	-3*	P048C			1.26	.19	1.22	0.70	
	5.09	-32.9	73.68	-1.9			1.9			.049	.046	1.25	.05	
N4527	12 31.59	2 55.7	292.61	112.5	.SXS4..	4	W100V	S G	4	1.80	.44	1.70	1.25	
	5.14	-32.9	65.18	-4.3	S 4 N -	3	4.0	S G	5VS	.023	.018	1.72	.05	
N4534	12 31.64	35 47.7	145.66	80.9	.SAS7\$.	7	P048C			1.48	.08	1.46		
	4.92	-32.9	80.83	4.9			2.5			.043	.038	1.47		
N4531	12 31.74	13 21.1	286.14	102.5	.S..1..	1	P048C			1.47	.16	1.43		
	5.08	-32.9	75.38	-1.3			2.4			.043	.038	1.45		
N4532	12 31.78	6 44.7	291.03	108.8	.IB.9..	10	W100V	I A *	1	1.46	.36	1.37		
	5.12	-32.9	68.94	-3.2	I *	5*	3.4	I A *		.035	.025	1.38		

NGC, IC, A Zw, VV (14)	Magnitudes				Color indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _L N _H N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N4492		13.2		.20	.64				.57					1735	1639	
N4487	12.0	.15	14.5	12.95	.06							1.14		0 1 200	-96	
13442	11.66		14.2	.23								1.01		1034	876	
N4494	10.9	10.75	12.0	.19	0.89	0.48	0.91	0.50	.83					1307	1289	
13453	10.53	.06	13.9	10.54	.03	.03	.02	.03	.45					0 3 15	-18	
N4497		13.3	13.0	.20	0.80	0.31	0.83	0.36						2556	2490	
N4500		.1	14.2	.24	.04	.05	.05	.05						0 1 19	-66	
N4496A	12.0			.20						.705	.925			3007	3128	ST
V 76	11.71		14.3	.20						1 0 1	.925			0 1 220	121	T
N4496B				.20										1763	1651	P
V 76				.19										0 2 42	-112	
N4498															-57	
A1229+66C				.27										9235	9386	
13457				.19										0 1 220	151	
N4501	10.9	10.275	12.5	.19	0.75	0.25	0.89	0.37	.65	1.48	.87*	.91	3.05	2057*	1989	PT
A1229+29	10.52	.06	13.7	9.86	.03	.04	.03	.02	.17	5 1 3	.97	1.01	4.43	1 1 62	-68	
N4503	12.8	12.05	12.3	.20	0.99	0.62	1.01	0.66				1.01		640	640	
N4506	12.26	.13	13.9	.19	.05	.06	.03	.03						1 0 10	-0	
N4504	12.3			.22								1.62			-82	
A1229+66B	11.92		14.4	.27								1.01		995	-72	
72466				.27										1 0 10	839	
A1229+66A				.27											-156	
72466	13.0	12.65		.21	.48										153	
N4517A	12.46	.11	15.2	.21	.07										154	T
A1230+09				.20										1317	1227	
13474				.21										0 1 300	-90	
13475	13.95	15.7	.19	0.66	0.09	0.67	0.13								-117	
13476	.09	15.9	.19	.04	.04	.04	.04								-75	
A1230+46	13.3		.19	0.47											-69	PS
13476	.1	14.7	.21	.03											5886*	
A1230+46	14.8	.15		.57	.18									0 2 43	5957	
N4517	11.6	11.10	.21	0.73	*	*	*	.54				1.82		1128	1001	PT
13478	11.07	.13	14.2	10.30	.05							1.06	1.59	1 1 10	-127	
13481		14.6	.20	1.02	.62									7086	-68	
V 43		.2	13.3	14.27	.04	.04			.90					0 1 80	7006	P
A1230+37			.20	.20					.60						-80	
13481A			.20											7304	35	
V 43														0 1 65	7224	
A1230+31			.19									1.32		336	-80	
N4515			.19									1.01		1 0 10	344	
N4516			.19												8	
13483		15.8	.20												-59	
V 43		.15	13.7	15.52	.82	.25		.76	.19					108	-66	P
N4509			.19	.19	.06	.07								0 1 40	28	
A1230+52			.22												-80	
N4519	12.6	12.355	.20	0.65	0.03	*	*	.57						9974	10071	
N4522	12.33	.08	14.3	12.03	.1	.05		.57						0 2 71	97	PT
13499	12.9		.20	.20				.03						1170	1078	
A1231-02	12.70		14.1	.20	0.86	0.31	*	*						0 1 66	-92	
N4520		14.20	.20	0.86	.03	.04									-89	
N4523		.09	14.0	.21											-82	
N4525			.22												-137	
10800			.19									.94		263	200	
N4526	10.7	10.585	11.6	0.94	0.54	0.97	0.58	.85				1.01		1 0 10	-63	
N4528	10.41	.08	13.5	10.18	.04	.06	.03	.45				1.16	3.39	450	-63	PST
N4527		12.65	.20	0.94	0.49	0.95	0.53					1.45	2.185	1 1 26	-95	
N4534	11.3	11.305	.21	.03	.03	.03	.03					1.02	2.18	1131	1134	
N4531	11.04	.10	13.0	.21	0.88	*	0.95	.74		1.48*	.165	1.02		0 1 150	3	
N4532			.19		.05	.04	.04			2 1 0					-80	PST
														1730	1614	
														1 1 10	-116	
															26	
															-72	
														2159	2059	PT
														0 1 21	-100	

NGC IC, A MK, DDO (1)	Coordinates				Classification							Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D/D) Log Do (12)	Log Ae m.e. (13)		
N4535	12 31.80	8 28.6	290.08	107.1	.SX55..	5	W100V	SB *AF	4	1.83	.13	1.80	1.50		
N4533	5.11	-32.9	70.64	-2.7	SX5	1*	4.3	S AF	SVS	.022	.017	1.82	.03		
N4536	12 31.81	2 36.1	292.86	112.8	.S..7*/	7	P048C			1.30	.67	1.14			
N4539	5.14	-32.9	64.86	-4.3	.SXT4..	4	W060V	S F	4	.047	.044	1.15			
A1232+06	12 31.90	2 27.7	292.96	112.9	S S T -	3*	3.8	S F	.SVS	1.87	.33	1.79	1.45		
D137	5.14	-32.9	64.73	-4.3	.SBS1*/	1	P048C			.023	.019	1.81	.05		
I3522	12 32.07	18 28.7	278.55	97.6			2.3			1.55	.35	1.47			
D136	5.04	-32.9	80.27	.2			1.8			.037	.030	1.49			
N4540	12 32.20	6 34.7	291.40	109.0	.I..9..	10	P048C			1.12	.01	1.12			
N4545	5.12	-32.9	68.80	-3.1		9				.046	.037	1.13			
A1232+48	12 32.25	15 29.8	284.07	100.4	.IB.9*/	10	P048C			1.17	.31	1.10			
I3528	5.06	-32.9	77.48	-5	.SXT6..	6	W100V	SI *AF	1	.043	.039	1.11			
N4541	12 32.33	15 49.6	283.69	100.1	I	7	3.3	I P A *		1.30	.09	1.28			
N4546	5.06	-32.9	77.80	-5	.SX55..	5	P048C			.032	.026	1.29			
N4548	12 32.33	63 48.0	126.10	53.4			2.2			1.44	.21	1.39			
N4550	4.48	-32.9	53.50	11.8						.038	.036	1.41			
N4551	12 32.4	48 1	130.82	69.0											
N4552	5.78	-32.9	69.13	8.2											
N4553	12 32.42	15 50.5	283.77	100.1	.SXR3..	3	W100V			.81	.04	.80			
N4554	5.06	-32.9	77.82	-5			2.4			.037	.035	.82			
N4555	12 32.61	0 3.2	294.14	115.3	.SXR4\$.	4	P048C			1.26	.32	1.18			
N4556	5.15	-32.9	62.37	-4.8			1.8			.037	.034	1.20			
N4557	12 32.9	-39 38	299.64	154.6	.LXR..	-1	S030V			1.36	.06	1.35			
N4558	5.44	-32.9	22.86	-13.7	.LBS..*	-3	W100V	D GK	4VS	.183	.095	1.41			
N4559	12 32.92	-3 31.1	295.24	118.0	E 6		3.6	E6 K	D3 S	1.54	.32	1.46			
N4560	5.18	-32.9	58.84	-5.7	.SRT3..	3	P200V	B G	3	.065	.035	1.24			
N4561	12 32.92	14 46.4	285.70	101.2	SB3 N		4.8	R G	D3	1.73	.09	1.71	1.33		
N4562	5.06	-32.9	76.83	-7	.LB.5/	-1	P048C			.024	.020	1.73	.02		
N4563	12 32.98	12 29.8	288.10	103.4	E 7		2.1	D K	23	1.54	.51	1.42	0.75		
N4564	5.08	-32.9	74.63	-1.3						.035	.027	1.44	.04		
N4565	12 33.05	3 18.6	293.33	112.2	.SB.0\$	0	P048C			1.33	.42	1.23			
N4566	5.14	-32.9	65.61	-3.8	.SBS9\$	9	P048C			.038	.036	1.25			
N4567	12 33.10	26 7.6	231.84	90.3			2.2			1.40	.46	1.29			
N4568	4.99	-32.9	86.23	2.6	.E.3..*	-5*	P048C		3	.036	.033	1.30			
N4569	12 33.11	12 32.4	288.18	103.3			2.1			1.30	.09	1.28	0.72		
N4570	5.08	-32.9	74.68	-1.3	.E.0..*	-5	P048C	E1 K	3	.046	.037	1.31	.06		
N4571	12 33.14	12 50.0	287.94	103.1	E 0		2.8	E1 K		1.62	.00	1.62	1.05		
N4572	5.08	-32.9	74.97	-1.2	.S..7*/	7*	P048C			.040	.035	1.65	.04		
N4573	12 33.21	26 31.6	285.54	89.9			.7			1.03	.89	.82			
N4574	4.98	-32.9	86.38	2.7						.050	.050	.83			
N4575	12 33.21	26 47.9	221.82	89.7	.E.3..*	-5	P048C			1.24	.07	1.22			
N4576	4.98	-32.9	86.43	2.8			2.0			.066	.057	1.25			
N4577	12 33.29	27 10.9	215.69	89.3	.E.4..*	-5*	P048C			1.17	.08	1.15			
N4578	4.98	-32.9	86.50	2.9	.LAR..*	-1	B060V			1.8	.071	1.18			
N4579	12 33.4	-39 10	299.72	154.1			2.7		4 S	.131	.120	.061			
N4580	5.44	-32.8	23.33	-13.5	.SXT6..	6	W100V	S A	5	.071	.33	1.94	1.60		
N4581	12 33.49	28 14.1	198.42	88.3	S 5	4	4.5	S FG	2	2.02	.018	1.95	.05		
N4582	4.97	-32.9	86.47	3.2	.S.....		P048N			.027	.018	1.95			
N4583	12 33.6	54 30	127.89	62.7			1.8			1.18	.12	1.15			
N4584	4.67	-32.9	62.75	9.9						.039	.038	1.17			
N4585	12 33.64	19 36.2	277.91	96.6	.SRT8..	8	W100V	SB *AF		1.18	.08	1.16			
N4586	5.03	-32.8	81.45	.9	S 5 K	6*	3.1		1	.033	.028	1.17			
A1233+81	12 33.7	81 53	123.67	35.1											
N4587	2.86	-32.9	35.50	14.8	.SAS3\$	3	....V	S GK	3	2.21	.77	2.03	1.55	
N4588	12 33.86	26 15.6	230.80	90.2	S 3	1*	5.0	S GK		.023	.016	2.05	.05		
N4589	4.98	-32.8	86.44	2.8	.E.6..*	-5	P048C		3	1.49	.35	1.41	0.85		
N4590	12 33.92	11 42.9	289.57	104.2	E 6		2.2	D K		.032	.025	1.44	.05		
N4591	5.08	-32.8	73.92	-1.3	.SAT4..	4	P200V	S F	45	1.47	.15	1.43			
N4592	12 34.02	11 32.0	289.79	104.4	S 5 KT.		4.2	S AF	D4	.025	.020	1.45			
N4593	5.08	-32.8	73.75	-1.3											
I3582	12 34.03	26 28.5	227.65	90.0	.S..2\$.	2\$	P048C			.67	.24	.62			
MK649	4.98	-32.8	86.54	2.9			.7			.039	.038	.64			
N4594	12 34.04	11 30.9	289.82	104.4	.SAT4..	4	P200V	S AF	2\$	1.66	.33	1.58			
N4595	5.08	-32.8	73.73	-1.3	S 5 KT.		4.4		3VS	.022	.018	1.60			
I3576	12 34.08	6 53.8	292.53	108.8	.S..9..	9	P048N			1.39	.038	1.39			
D138	5.11	-32.8	69.19	-2.6	S	8*	2.3			.039	.038	1.40			
A1234-72	12 34.09	-72 19.0	301.86	188.3											
I3585	6.30	-32.8	-9.75	-16.3	.LAS0..	-2	P048C			1.15	.03	1.15			
I3586	12 34.19	27 6.2	217.31	89.4			1.8			.051	.058	1.18			
I3587	4.97	-32.8	86.70	3.1											
I3588	12 34.21	13 32.0	288.29	102.5	.IB.9..	10	P200V		1	1.32	.28	1.26			
N4596	5.07	-32.8	75.71	-7			3.8			.035	.030	1.27			
N4597	12 34.31	13 26.4	288.47	102.6	.SXT2..	2	P200V	S P F *	5	1.98	.31	1.90	1.45		
N4598	5.07	-32.8	75.62	-7	S 4 N		5.0	S A	5VS	.022	.017	1.92	.04		
N4599	12 34.35	7 31.4	292.43	108.2	.L....	-2	P200V	D K	3	1.61	.50	1.49			
N4600	5.11	-32.8	69.82	-2.4	E 8		4.1	D K	4 S	.034	.029	1.52			
N4601	12 34.42	14 29.6	287.54	101.6	.SAR7..	7	P048C			1.58	.05	1.57			
N4602	5.06	-32.8	76.65	-4	S NK.		2.7			.027	.024	1.58			
I3598	12 34.89	28 28.9	193.05	88.1	.SAR1\$.	1	P048C	SD F	2VS	1.24	.49	1.12			
N4603	4.96	-32.8	86.70	3.6			1.6			.038	.034	1.14			
N4604	12 34.98	9 49.8	291.69	106.1	.LAR0\$.	-2	P048C			1.56	.12	1.53	0.95		
N4605	5.09	-32.8	72.12	-1.6	S 0		2.6	D G		.035	.035	1.56	.07		
N4606	12 35.01	4 38.6	294.05	111.1	.SXT4..	4	P048C			1.15	.16	1.11			
N4607	5.13	-32.8	67.00	-3.0			1.7			.039	.032	1.13			
I3600	12 35.1	27 24	212.21	89.2						.79	.18	.75			
MK650	4.97	-32.8	86.91	3.3						.075	.100				
N4608	12 35.15	-40 15.8	300.15	155.3	.SBS4..	4	S030V			1.34	.09	1.32			
N4609	5.47	-32.8	22.26	-13.3			1.9			.141	.091	1.36			
A1235+07	12 35.20	7 22.7	293.10	108.4	.I..9..	10	P048N			1.14	.10	1.12			
D139	5.11	-32.8	69.71	-2.2	I	9				.039	.038	1.13			
N4610	12 35.20	12 5.4	290.40	103.9	.SXT3..	3	P200V	SB *GK	3	1.73	.09	1.71	1.20		
I3599	5.08	-32.8	74.36	-9	S 3 N		4.8	BS K	D3 S	.027	.023	1.73	.02		
N4611	12 35.22	26 58.9	219.99	89.6	.S..3\$P	3\$	P048C								
N4612	4.97	-32.8	86.91	3.3											
N4613	12 35.26	5 38.6	293.85	110.1	.SATIP.	1	W100V	S F	3VS	1.38	.11	1.35			
N4614	5.12	-32.8	68.00	-2.7	S 4 N		3.5			.033	.027	1.37			
N4615	12 35.47	74 28.0	126.24	42.7	.E.2..*	-5	W060V	E1 *K		1.48	.05	1.47			
N4616	3.88	-32.8	42.90	13.9	S 0		3.3	DE K	D3	.060	.044	1.52			
A1235-35	12 35.7	-35 20	299.96	150.3	.SXT5..	5	P048C								
N4617	5.42	-32.8	27.19	-12.4											

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₈ B _T (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N _H No m.e. (28)	V ₀ ΔV (29)	
N4535	11.1	10.665	13.6	.20	0.70	*	0.80	0.10	.62			1.485		1946	1853	T
N4533	10.55	.10	14.3	10.35	.05		.03	.04				2.01	2.515	2 3 8	-93	
N4536	11.2	10.995	13.7	.21	0.60	*	0.73	0.15	.48			1.19		1927*	1810	PT
N4539	10.73	.08	14.4	10.50	.05		.04	.05				1.02	3.07	1 1 10	-117	T
A1232+06		12.88	14.6	.19	.86							1.09		2027	-50	T
		.11			.07				.47			1.01	-1.68	1 0 30	1926	
		14.73	15.2	14.52	.07										-101	
I3522				.19								.70		662	599	
N4540	12.9			.19								1.01		1 0 15	-63	P
N4545	12.87		14.0	.26											-61	S
A1232+48				.21											144	
I2 39														9305	9385	
I3528				.19										0 1 185	80	P
N4541				.21											-61	
N4507	12.9			.44											-126	
N4546	12.64		14.2	.22	.98			.91							-240	
	11.4	11.3		11.00	.06									1014	874	
N4548	11.39	.15	13.1	.19	.06							1.32		0 1 40	-140	
	11.9	10.985	13.1	.19	0.79	0.30	0.91	0.40	.73			1.01	2.56	1 1 34	468	PT
N4550	11.26	.05	14.3	10.71	.02	.04	.02	.02	.25	1.60*	1.325		.695	1 1 34	-65	P
	12.7	12.40	11.6	.19	0.91	0.43	0.92	0.49	.79	1 1 3	2.10			350	275	
	12.48	.09	13.7	11.90	.03	.04	.02	.03	.32					0 1 50	-75	
N4544				.20												
N4562				.19											-113	
N4551		12.85	11.9	.19	0.95	0.54	0.97	0.59	.90					978	-15	P
		.06	14.1	12.65	.03	.03	.03	.03	.50					0 1 300	903	
N4552	11.3	10.815	11.5	.19	1.00	0.59	1.00	0.62	.95					0 1 239	-75	
I3543	10.82	.06	13.9	10.62	.04	.06	.02	.03	.54	0 0 5	-.205			0 3 42	165	
N4555				.19											-74	
N4556				.19										6694	6682	
N4553				.43										0 1 150	-12	
N4559	10.7	10.30	13.8	.19	0.45	*	0.49	-.03	.34			2.25		7402	7392	
N4566	10.12	.13	14.4	9.84	.05		.03	.05				2.02	1.08	0 1 150	-10	
				.23										807	802	PST
														2 1 8	-5	
														5290	5398	
														0 1 150	108	
N4561	12.9			.19												
A1233+81	12.96		13.5	.38											-44	P
72475														9255	9458	
N4565	10.7	10.3	13.5	.19	0.83	*	0.95	0.54	.64	1.00*	1.735		4.615	0 1 185	203	PT
	9.94	.13	14.3	9.49	.05		.06	.05		3 1 0				1136	1122	
N4564	12.1	11.9	11.6	.20	0.96	0.55	0.99	0.59	.90					0 3 36	-14	ST
	11.74	.2	13.5	11.68	.03	.06	.03	.04	.51					1020	942	
N4567	12.3	12.085		.20	.76					1.60*	.275	*	.845	0 1 34	-78	PT
V219	12.20	.09	13.9	11.75	.07				.67	1 1 4	1.92			2199*	2121	
I3582				.19										1 2 22	-78	
N4568	12.2	11.675		.20	.87				.75			.72*		7122	7109	
V219	11.87	.09	14.0	11.19	.07							1.01	3.575	0 1 150	-13	PT
I3576				.20								.90		2247	2168	
A1234-72				1.95								3.01		1 1 24	-79	
I3585				.19						1 0 0				1077	979	
I3583				.19										3 0 9	-98	
N4569	11.2	10.235	13.0	.19	0.75	0.30	0.78	0.30	.65	1.11	.845	1.13	4.01	7125	6874	
N4570	10.46	.07	14.2	9.80	.03	.05	.03	.04	.22	3 0 3	.845	1.01	3.94	0 1 125	-251	PT
	12.0	11.7		.20	.95				.84					7412	7402	
N4571	11.84	.15	13.4	11.27	.06									0 1 150	-10	
I3598	12.8	11.835		.19	.52										-70	T
	12.25	.09	14.5	.19	.07										-66	
N4578	12.5	12.275	12.5	.20	0.92		0.95		.84						-3	
N4576	11.99	.08	14.6	11.99	.04		.04							2282	2197	
I3600		14.27	14.5	.20	.77									0 1 50	-85	T
N4575		.11		.19	.07										-107	
A1235+07				.45										4618	4610	
				.20										0 1 72	-8	
N4579	11.0	10.615	12.1	.19	0.83	0.32	0.90	0.43	.76	1.38	1.07*	1.21	2.82	1805	1730	PT
I3599	10.66	.05	13.9	10.33	.02	.03	.02	.02	.26	4 2 4	1.07	1.01	3.21	1 1 46	-75	
N4580	12.8		14.2	.20										6459	6449	
N4589	12.69			.31										0 1 72	-10	PT
A1235-35	12.1	11.8	14.1	11.46											-102	
	11.72	.15		.38										1825	2006	
														0 1 75	181	
														2931	2700	
														0 1 20	-231	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log Do (12)	Log A _e m.e. (13)
N4584	12 35.78 5.07	13 23.1 -32.8	289.93 75.65	102.7 -1.6	.SXS1s.	1	P048C 1.8			1.18 .037	.11 .034	1.15 1.17	
N4586	12 35.92 5.13	4 35.6 -32.8	294.65 66.98	111.2 -2.8	.SAS1*/ S 4	1*	P048C 2.4	D *F DS G	3 S	1.66 .033	.43 .026	1.54 1.56	
A1236+56 MK219	12 36.31 4.60	56 12.1 -32.8	126.66 61.11	61.1 10.7	.P.....	5	P048N .5			.61 .050	.26 .050	.55 .58	
I3618	12 36.7 4.96	26 57 -32.8	221.64 87.23	89.7 3.6									
N4592	12 36.74 5.16	-0 15.4 -32.8	296.43 62.19	115.9 -3.9	.SAS8*. S 3	8 4	W100V 3.6	SI *AF*	1	1.66 .034	.48 .026	1.54 1.55	
I3620	12 36.8 4.95	28 11 -32.8	196.11 87.19	88.5 3.9									
I3617 D140	12 36.88 5.10	8 14.2 -32.8	293.94 70.62	107.7 -1.6	.I...9.. I	10 8*	P048N 1.5			1.12 .039	.29 .038	1.05 1.06	
I3623	12 36.9 4.96	27 23 -32.8	212.67 87.31	89.3 3.7									
N4603A	12 36.90 5.48	-40 27.9 -32.8	300.52 22.08	155.6 -13.0	.S...3s. RSBT3..	3s 3	S030C P200V			1.41 .141	.44 .091	1.31 1.36	
N4593	12 37.08 5.19	-5 4.2 -32.8	297.49 57.40	120.6 -5.1	SB2	3	4.5	B G	4	1.67 .034	.11 .025	1.57 1.59	
N4595	12 37.35 5.05	15 34.4 -32.8	289.56 77.87	100.7 .6	.SXT3s. S 5 K	3 5*	P048C 1.9			1.26 .036	.17 .033	1.22 1.24	
N4594	12 37.38 5.23	-11 21.0 -32.8	298.46 51.15	126.7 -6.7	.SAS1./. S 2	1	P200V 5.0	SDP*K DS K	4	1.95 .024	.34 .017	1.87 1.90	
N4596	12 37.41 5.08	10 27.1 -32.8	293.31 72.83	105.6 -8.8	.LBR... SB0	-1	W100V 3.8	B K R K	D4	1.59 .042	.14 .029	1.56 1.59	
N4603B	12 37.58 5.49	-40 29.3 -32.7	300.67 22.06	155.6 -12.9	.S...5s. SB0	5s	S030C 1.4			1.29 .158	.50 .095	1.17 1.22	
N4597	12 37.63 5.19	-5 31.5 -32.8	297.81 56.96	121.1 -5.1	.SBT9.. SB5 K	9 5*	W100V 3.6	B AF		1.56 .040	.29 .029	1.49 1.50	
A1237-09	12 37.7 5.22	-9 2 -32.7	298.32 53.46	124.5 -6.0	.SX...s. S 5 NK	5*	P048C 1.7			1.14 .061	.18 .058	1.10 1.12	
N4605	12 37.78 4.44	61 53.1 -32.8	125.34 55.5	55.5 12.0	.SB55P. S	5	W060V 3.5	I A *	1	1.74 .026	.38 .020	1.65 1.67	
N4603C	12 37.99 5.49	-40 29.6 -32.7	300.75 22.06	155.6 -12.8	.L....../ SB0	-2	S030V 1.2			1.78 .024	.80 .112	1.19 1.23	
I3646	12 38.0 4.96	26 47 -32.7	226.52 87.48	90.0 3.8						1.12 .075	.60 .100	.98 1.00	
I3645	12 38.0 4.96	26 48 -32.7	226.15 87.48	89.9 3.8						.87 .075	.31 .100	.80 1.00	
N4602	12 38.03 5.19	-4 51.5 -32.7	297.90 57.63	120.4 -4.8	.SXT4.. S 5 NK	4 3*	W100V 3.5	S AF	3 S	1.56 .044	.40 .028	1.47 1.49	
N4601	12 38.05 5.49	-40 37.2 -32.7	300.77 21.93	155.8 -12.8	.SB1*. S 5 K	1	P048C 4.0			1.35 .040	.54 .029	1.22 1.38	
N4603	12 38.19 5.50	-40 42.1 -32.7	300.80 21.85	155.8 -12.8	.SAS5*. S 5 K	5	S030V 2.3		3 S	1.58 .120	.18 .077	1.54 1.58	
I3651	12 38.3 4.96	27 0 -32.7	221.94 87.59	89.8 3.9	.L.....	-2	P048N 1.8			1.10 .050	.80 .079	1.10 1.13	
A1238+28A	12 38.4 4.94	28 15 -32.7	192.46 87.51	88.6 4.3						.79 .075	.00 .100	.79 1.00	
A1238+28B	12 38.4 4.94	28 15 -32.7	192.46 87.51	88.6 4.3									
N4606	12 38.44 5.07	12 11.2 -32.7	293.25 74.59	104.0 -1.1	.SBS1*. S 5 K	1	P048C 2.0		3	1.44 .041	.25 .031	1.38 1.40	
N4607	12 38.68 5.07	12 9.6 -32.7	293.49 74.57	104.1 -1.1	.SB.3s/ S 5 K	3	P048C 2.0			1.51 .040	.61 .029	1.54 1.58	
N4608	12 38.70 5.08	10 25.7 -32.7	294.39 72.86	105.7 -5.5	.LRR0.. SB0	-2	W100V 3.7	R K R K	D4	1.50 .042	.08 .029	1.48 1.51	
N4617	12 38.8 4.67	50 42 -32.7	127.08 66.62	66.7 9.9	.S...3s. S 5 K	3	P048N 1.9			1.49 .039	.66 .038	1.33 1.35	
N4612	12 39.01 5.10	7 35.3 -32.7	295.74 70.05	108.5 -1.2	.RLX.0.. E P	-2	P200V 4.0	DB *K D GK	D4 S	1.34 .054	.08 .036	1.32 1.35	
N4618	12 39.14 4.80	41 25.6 -32.7	130.58 75.83	75.8 7.8	.SBT9.. S 5 K	9	W100V 4.0	I A SIP*A *		1.64 .026	.06 .019	1.63 1.64	
N4619	12 39.31 4.87	35 20.2 -32.7	137.00 81.7	81.7 6.3	.SBR3P* S 5 K	3	P048C 1.9			1.19 .038	.02 .035	1.19 1.21	
N4603D	12 39.40 5.50	-40 32.9 -32.7	301.04 22.02	155.7 -12.6	.SA.6*. S 5 K	6*	P048C 1.6			1.22 .050	.16 .095	1.18 1.21	
N4625	12 39.48 4.80	41 32.8 -32.7	130.25 75.72	75.7 7.9	.SXT9P. S 5 K	9	W100V 3.5		3 S	1.38 .028	.07 .021	1.36 1.37	
N4620	12 39.5 5.06	13 13 -32.7	293.64 75.64	103.1 .4	.L.....	-2	P048N 2.1			1.31 .051	.05 .058	1.30 1.33	
N4621	12 39.52 5.07	11 55.4 -32.7	294.38 74.36	104.4 1.1	.E.5... E 3	-5	W100V 4.0	FS K ES K	D3	1.71 .038	.18 .030	1.66 1.69	
N4616	12 39.54 5.50	-40 22.1 -32.7	301.06 22.20	155.5 -12.5	.E.0*.. E 4 P.	-5*	S030V 1.7			1.20 .224	.00 .120	1.20 1.27	
N4627	12 39.56 4.89	32 50.8 -32.7	142.97 84.18	84.2 5.7	.E.4.P. E 5	-5	P200V 4.1		1	1.43 .042	.13 .029	1.40 1.43	
N4623	12 39.64 5.10	7 57.1 -32.7	296.08 70.43	108.2 -1.0	.LB...s/ E 5	-1	P048C 2.0			1.42 .040	.45 .037	1.31 1.34	
N4631	12 39.68 4.89	32 48.8 -32.7	142.86 84.22	84.2 5.7	.SBS7./ S 5 K	7 5*	P200V 5.0	SI *AF*	1	2.18 .024	.66 .016	2.02 2.03	
I3687 D141	12 39.83 4.83	38 46.5 -32.7	131.98 78.47	78.4 7.3	.IXS9.. I	10 8	P048C 2.6			1.54 .039	.10 .038	1.51 1.52	
N4622	12 39.89 5.51	-40 28.2 -32.7	301.14 22.10	155.7 -12.5	.PSAR1.. S 5 K	1	P048C 1.9		3 S	1.33 .224	.03 .129	1.32 1.37	
N4648	12 39.92 3.71	74 41.5 -32.7	123.82 22.69	42.5 14.2	.E.3... S 5 K	-5	W060V 2.9		4	1.34 .049	.10 .048	1.31 1.36	
N4632	12 39.97 5.15	0 11.4 -32.7	298.08 62.70	115.7 -3.0	.SA.5.. S 5 K	5 4	W100V 3.4	S AF S AF	1	1.50 .031	.37 .025	1.41 1.43	
N4630	12 39.97 5.12	4 14.0 -32.7	297.30 66.73	111.8 -1.9	.IBS9*. P	10	P048C 1.9			1.23 .036	.13 .033	1.20 1.21	
N4633	12 40.11 5.05	14 37.8 -32.7	293.36 77.06	101.8 1.0	.SKS7*. S 5 K	7	P048C 1.9			1.32 .036	.35 .028	1.24 1.25	
N4635	12 40.16 5.00	20 13.2 -32.7	286.82 82.54	96.4 2.5	.SKS7.. N *	7	P048C 2.1	S A		1.31 .035	.12 .031	1.28 1.29	
N4634	12 40.17 5.05	14 34.2 -32.7	293.46 77.01	101.9 1.0	.SB.6*/ S 5 K	6	P048C 1.8			1.38 .035	.55 .027	1.25 1.26	
N4638	12 40.27 5.07	11 42.9 -32.7	295.15 74.18	104.6 .2	.L...-/ E 5	-3	L036V 2.6	D G D *K		1.45 .043	.24 .035	1.40 1.43	

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _c (15)	B _T m.e. (16)	m' ₂₈ m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)		
N4584				.19											-69	T	
N4586	13.0	12.60		.20	1.01										-106		
A1236+56	12.50	.11	14.6	.23	.07									3007	3123		
I3618				.19										0 1 220	116		
N4592	12.4			.21										6536	6527	-9	
	12.16		14.1											0 1 72	-9		
I3620				.19										6574	6570		
I3617				.20										0 1 72	-4		
I3623				.19										2116	2026	-90	
N4603A				.45										1 0 100	-90		
N4593	12.1			.22										6987	6980		
	11.72		14.3											0 1 72	-7		
N4595	13.1			.19											2703	-239	PT
N4594	13.22		13.9	.24										0 1 192	-143	P	
N4596	8.1*	9.27	11.5	.04	0.97	*	1.00	0.63	.84					1128	-59		
N4596	9.42	.06	13.0	.20	.04		.03	.05						0 4 25	963		
N4603B	12.2	11.47	13.9	.20	.99										-165		T
N4603B	11.73	.11		.45	.07										-81	-239	
N4597	12.9			.22											-239		
	12.58		14.5												-144		
A1237+09				.23										6354	6197		
N4605	10.9	10.965		.25	*	*				1.48*	.835		2.505	1 1 18	-157	286	
N4603C	10.88	.14	13.6	10.41	.45					1 1 1	2.015			0 2 45	138		
I3646				.19											-238		
I3645				.19										6559	6550		
N4602	12.4			.22										0 1 72	-9	-141	
N4601	12.28		13.9	.46											-239		
N4603	12.5			.46											-239		P
I3651	12.09		14.4	.19										4804	4796		
A1238+28A				.19										0 1 72	-8	9476	
														9476	9476		
														0 2 51	-2		
A1238+28B		*		.19	*	*								7885	7883		
N4606	12.74			.19	.84									0 1 86	-2	PT	
N4607	.11		14.2	.19	.07										-73		
N4607	13.79			.19	.92										-73		PT
N4608	.11		14.7	.20	.07										-73		PT
N4608	12.7	12.09		.20	.96										-80	94	
N4617	12.22	.11	14.3	.22	.07										-80		
N4612	12.6*			.20											94		
N4612	12.22			.20											-92		PT
N4618	11.5	11.275	13.6	.20	0.43	-.15	0.49	-.12	.37					558	613	PT	
V 73	11.22	.07	14.2	.19	.03	.05	.02	.04	-.20					0 2 21	55		
N4619				.19											29		
N4603D				.45										2635	2397		
N4625	12.905	.07	14.5	.20	0.60	-.14	*	*						0 1 180	-238	PT	
N4620				.19	.05	.04									56	-68	
N4621	11.4	10.75	12.0	.19	.96	*	0.98	0.57	.91					414	341		
N4616	10.83	.13	13.8	10.55	.05		.02	.03						0 1 125	-73		
N4616				.45										4310	4073		
N4627	12.9	.1	14.1	.19	0.62	0.13	0.60	0.10						0 1 180	-237	PT	
N4623	13.2		14.7	.20	.04	.06	.03	.04							18	-90	
	13.05		13.9												-90		
N4631	9.6	9.75	13.5	.19	0.54	*	0.55	-.06	.37	2.14	.84	2.46	2.23	620	638		
I3687	9.33	.09	13.8	9.03	.04		.03	.05		5 5 3	.84*	2 .05	1.29	3 3 5	18		
N4622				.45								2 .01		357	401	P	
N4648				.32										2 0 9	44		
N4632	12.1			.21										4223	3986		
	12.22		13.6											0 1 180	-237		
N4630	13.1			.20											183	S	
N4633	12.97			.19	.65									1693	1572		
N4635	13.0	.11	14.4	.19	.07									0 1 30	-121		
N4634	12.92		14.0	.19											-105		
N4638	12.2	12.0	13.6	.20	.78				.78						-61	T	
	12.03	.1	13.5	11.74	.07	*									-37		
					.85										-61		
					.1									1080	1006		
														0 1 150	-74		

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log A _e m.e. (13)
N4636	12 40.29 5.13	2 57.7 -32.7	297.76 65.47	113.0 -2.2	.E.0+.. E 1	-5	P200V 4.9	E1 K E1 K	4	1.79 .034	.09 .030	1.77 1.80	1.35 .04
N4645A	12 40.35 5.52	-41 5.1 -32.7	301.26 21.49	156.3 -12.5	.LB.0+.. 2.1	-2	P048C 2.1			1.65 .183	.52 .095	1.53 1.59	
N4639	12 40.36 5.06	13 31.9 -32.7	294.30 75.99	102.9 .7	.SXT4+.. S33	4	P048C 2.4	S G		1.46 .033	.14 .027	1.43 1.45	
N4637	12 40.38 5.07	11 42.6 -32.7	295.25 74.18	104.6 .2	.L...S.. 1.6	-25	P048C 1.6			1.17 .051	.27 .058	1.11 1.14	
N4644	12 40.4 4.56	55 25 -32.7	125.60 61.94	62.0 11.1	.SB.3*P 1.7	3	P048N 1.7			1.26 .039	.40 .038	1.17 1.19	
N4644A	12 40.5 4.56	55 25 -32.7	125.57 61.94	62.0 11.1						1.05 .042	.76 .045	.87 .70	
A1240+30A	12 40.6 4.91	30 40 -32.7	151.84 86.25	86.4 5.4						.83 .050	.54 .050	.70 .91	
A1240+30B	12 40.6 4.91	30 40 -32.7	151.84 86.25	86.4 5.4						.94 .050	.11 .050	.91 .76	
N4646	12 40.6 4.57	55 7 -32.7	125.59 62.24	62.3 11.1						.83 .050	.27 .050	.76 .70	
N4642	12 40.74 5.16	-0 22.2 -32.7	298.58 62.16	116.3 -3.0	.S...3+ 1.7	3	P048C 1.7			1.31 .036	.48 .033	1.20 1.22	
N4645B	12 40.78 5.52	-41 5.2 -32.7	301.34 21.49	156.3 -12.4	.LB...S.. 1.4	-2	S030C 1.4			1.32 .224	.48 .112	1.21 1.27	
N4643	12 40.79 5.14	2 15.1 -32.7	298.19 64.78	113.8 -2.3	.SBT0+.. SB0	0	P200V 4.4	B K R K	3	1.53 .043	.10 .031	1.50 1.53	0.85 .03
N4647	12 41.02 5.07	11 51.2 -32.7	295.76 74.34	104.5 .4	.SXT5+.. S 5 K +	5	P200V 4.3	SD *F D F	2 3VS	1.48 .026	.09 .023	1.46 1.48	0.85 .1
N4622A	12 41.1 5.52	-40 26 -32.7	301.39 22.14	155.7 -12.2	.LX...S.. 1.7	-35	P048C 1.7						
N4622B	12 41.1 5.52	-40 26 -32.7	301.39 22.14	155.7 -12.2	.S...35P 22.14	35	P048C						
N4649	12 41.15 5.07	11 49.5 -32.7	295.88 74.32	104.6 .4	.E.2+.. E 1	-5	P200V 5.0	F2 K E2 K		1.86 .035	.07 .024	1.85 1.88	1.35 .05
N4651	12 41.21 5.03	16 40.1 -32.7	293.08 70.12	99.9 1.8	.SAT5+.. 1.8	5	W100V 3.8	S G		1.58 .029	.15 .021	1.54 1.56	1.08 .04
N4653	12 41.29 5.16	-0 17.2 -32.7	298.87 62.25	116.2 -2.8	.SXT6+.. S 6	6	W100V 3.6			1.41 .038	.03 .028	1.40 1.42	
N4645	12 41.42 5.53	-41 28.5 -32.6	301.49 21.10	156.7 -12.4	.E.3+.. 1.8	-5	S030V 1.8		3 5	1.35 .224	.16 .129	1.31 1.38	
N4654	12 41.44 5.05	13 24.0 -32.7	295.45 75.89	103.1 .9	.SXT6+.. S 5 K -	6	W100V 3.9	BS *A S A		1.67 .029	.20 .021	1.63 1.64	1.28 .03
A1241-05 D142	12 41.48 5.20	-5 24.3 -32.6	299.56 57.14	121.2 -4.2	.S...9+.. S	9	P048F 2.4			1.48 .061	.14 .058	1.45 1.46	
N4656	12 41.53 4.89	32 26.5 -32.7	140.35 84.71	84.7 6.0	.SB50P+.. S 5 T +	9	W060V 4.0	I A I A		2.14 .032	.62 .022	1.99 2.00	1.55 .05
A1241+55A MK220	12 41.53 4.55	55 10.2 -32.7	125.29 62.20	62.3 11.2	.S...5P 62.20	7	P048C						
A1241+55B MK221	12 41.56 4.55	55 10.8 -32.7	125.28 62.3	62.3 11.2	.P..... 11.2		P048C			1.16 .075	.21 .100	1.11 1.14	
N4650	12 41.59 5.52	-40 27.5 -32.6	301.49 22.12	155.7 -12.2	.SB50+.. 155.7	0	P048C						
N4657	12 41.75 4.89	32 28.7 -32.6	139.75 84.7	84.7 6.1	.I...9+.. 2.3	10	W060V 2.3	I A		1.07 .048	.19 .046	1.03 1.04	
A1241+00 D144	12 41.92 5.15	0 44.7 -32.6	299.07 63.29	115.3 -2.4	.SB.9+.. 2.3	9	P048N 2.3			1.39 .046	.05 .045	1.37 1.38	
N4650A	12 42.0 5.52	-40 26 -32.6	301.57 22.14	155.7 -12.1	.I.0.P5 22.14	05	P048C						
N4659	12 42.0 5.05	13 47 -32.6	295.82 76.29	102.7 1.2	.S...0+.. 2.0	0	P048N 2.0			1.26 .050	.13 .050	1.24 1.26	
A1242+34 D143	12 42.00 4.86	34 39.8 -32.6	134.23 82.58	82.5 6.7	.I...9+.. I	10 9	P048N 2.2			1.38 .052	.14 .050	1.35 1.36	
N4660	12 42.02 5.07	11 27.6 -32.6	296.80 73.98	105.0 .5	.E.5+.. E 5	-5	P048C 2.3			1.44 .046	.15 .038	1.40 1.43	0.85 .09
N4658	12 42.04 5.23	-9 48.7 -32.6	300.17 52.75	125.5 -5.2	.SB54+.. S 5 K -	4 5	W060V 2.7	F6 K S FG*		1.34 .048	.33 .038	1.26 1.28	
A1242+28	12 42.1 4.92	28 45 -32.6	171.03 87.97	88.3 5.2	.S...+.. 1.1		P048N 1.1			.08 .039	.22 .038	.84 .86	
N4662	12 42.1 4.83	37 23 -32.6	130.86 79.9	79.9 7.4	.SBT4+.. 2.3	4	P048N 2.3			1.39 .039	.07 .038	1.38 1.40	
I3723 MK441	12 42.12 4.78	41 0.6 -32.6	128.50 76.32	76.3 8.2						.56 .042	.15 .045	.52 1.16	
N4663	12 42.19 5.23	-9 55.5 -32.6	300.24 52.64	125.6 -5.2	.LB50+.. E 5	-2	W060V 2.6			1.14 .073	.09 .079	1.12 1.15	
A1242-20	12 42.2 5.31	-20 10 -32.6	300.85 42.40	135.6 -7.7	.SB55+.. 1.7	5	P048C 1.7		4	1.11 .061	.14 .058	1.07 1.09	
I3720 D145	12 42.28 5.06	12 20.2 -32.6	296.71 74.85	104.2 .8	.F.6+.. E 5	-5*	P048C 2.3			1.45 .071	.21 .071	1.40 1.43	
I3718	12 42.3 5.06	12 37 -32.6	296.62 75.13	103.9 .9	.S..... 2.1		P048N 2.1			1.47 .039	.39 .038	1.38 1.40	
A1242+56	12 42.3 4.51	56 25 -32.6	124.92 60.96	61.1 11.6	.SB.45+.. 1.5	4	P048N 1.5			1.30 .046	.67 .045	1.14 1.16	
N4650B	12 42.5 5.53	-40 33 -32.6	301.68 22.03	155.8 -12.0	.SA.25+.. 2.0	2*	P048C						
N4669	12 42.5 4.54	55 9 -32.6	125.00 62.22	62.3 11.3	.S..... 1.5		P048N 1.5			1.23 .039	.53 .038	1.11 1.13	
N4665	12 42.55 5.13	3 19.8 -32.6	299.07 65.88	112.8 -1.6	.SB50+.. SA0	0	W100V 4.0	B K	3	1.62 .036	.07 .029	1.60 1.62	
N4666	12 42.58 5.16	-0 11.2 -32.6	299.55 62.37	116.2 2.5	.S4.5+.. S 5	5	W100V 3.6	S G S G	2 3	1.65 .029	.67 .021	1.54 1.56	1.00 .04
I3730	12 42.6 4.99	21 27 -32.6	288.91 83.87	95.4 3.4		2*				.58 .075	.00 .100	.58 1.10	
N4670	12 42.84 4.93	27 24.0 -32.6	212.65 88.63	89.7 5.0	.SB50P+.. E P	0	P200V 3.8	A P* K * D P* K *	5 5	1.25 .033	.11 .027	1.23 1.25	
N4668	12 42.97 5.16	-0 15.7 -32.6	299.07 62.30	116.3 -2.4	.SB57+.. P	7*	W100V 2.9			1.16 .034	.22 .026	1.10 1.11	
I3742	12 43.0 5.05	13 36 -32.6	296.92 76.13	103.0 1.4	.SB..... 1.9		P048N 1.9	I A *		1.27 .039	.26 .038	1.21 1.23	
A1243-05 D146	12 43.10 5.20	-5 48.0 -32.6	300.33 56.77	121.7 -3.9	.I...9+.. 2.5	10 9	P048F 2.5			1.47 .061	.05 .058	1.46 1.47	
N4673 MK656	12 43.13 4.93	27 20.1 -32.6	215.53 88.70	89.7 5.0	.E.1+.. 1.7	-5	W100V 2.9			1.09 .048	.09 .042	1.07 1.10	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _c (15)	B _T m.e. (16)	m' _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _R N _L N _R N ₊ (24)	α ₊ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	V ₀ ΔV (29)		
N4636	10.8	10.505	12.7	.20	0.94	0.50	0.95	0.54	.89						979	869	PST
N4645A	10.18	.06	14.2	10.29 .46	.02	.03	.02	.02	.46						0 3 26	-110	
N4639	12.3	12.21		.19	.70				.62						963	897	PT
N4637	12.19	.11	14.0	11.90 .20	.07										0 1 19	-66	
N4644				.23											4764	4878	
N4644A				.23											0 1 86	114	
A1240+30A				.19											4913	5027	P
A1240+30B				.19											0 1 19	114	P
N4646				.23												9	
N4642				.21											4551	4664	
N4645B				.46											0 1 127	113	
N4643	11.6	11.55	11.3	.21	0.95	0.55	0.98	0.61	.87							-238	PT
N4647	11.55	.09	13.8	11.25	.03	.04	.02	.02	.49						1346	1234	
V206	12.0	11.915	11.6	.19	0.65		0.9		.58	.85%	.78%		2.85%		0 1 59	-112	PT
N4622A	11.90	.11	13.9	11.64 .45	.1		.1			1 0 2	.78%				1358	1286	
N4622B				.45											0 1 64	-72	P
N4649	10.6	9.835	12.1	.19	1.00	*	1.01	0.69	.95						4776	4539	
V206	9.86	.07	13.9	9.62	.03	*	.02	.03	.50						0 1 180	-237	PT
N4651	11.8	11.30	12.2	.19	0.58	*	0.76	0.15	.50			1.55			4658	4421	PT
V 56	11.62	.13	13.7	10.99	.05		.03	.03				2 .01	1.70		0 1 180	-237	
N4653	13.1	12.82		.21	.53										4658	4421	T
N4645	12.74	.11	14.6	.47	.07										0 1 180	-237	
N4654	13.1			.47											2611	2373	T
N4654	12.81		14.0	.19	0.64	-.07	0.68	0.00	.55			1.43			0 1 29	-238	PT
N4654	11.7	11.10	13.0	.19	0.64	-.07	0.68	0.00	.55			2 .01	2.24		1036	970	
A1241-05	11.38	.08	13.8	10.75	.03	.04	.03	.03	-.13						3 2 7	-66	
N4656				.22								1.22			1430	1289	
N4656	11.3	10.75	14.0	.19	0.43	*	0.35	-.29	.25			1 .01			1 0 10	-141	PT
A1241+55A	10.80	.13	14.7	10.00	.04	*	.05	.05				2.19	.99		665*	662	
I2 41				.23								3 .05			4 3 6	17	
A1241+55B				.23											4886	5000	
I2 41				.45											0 2 43	114	
N4650				.19											4931	5045	
N4657				.19											0 3 40	114	
A1241+00				.21											2634	2397	P
N4650A				.45											0 1 180	-237	
N4659				.19													
A1242+34				.19													
I2 42=V127				.20											1289	1289	
N4660	12.3	11.85	11.6	.20	0.95		1.01		.89						1430	1289	
N4658	12.03	.09	13.7	11.63	.04		.05					1 .01			1 0 10	-117	
A1242+28	12.4		13.5	.23											2475	2239	P
N4662	12.74		13.5	.20	.31	-.35			.21						0 1 180	-236	
I3723		14.8	14.42	.20	.06	.07			-.41							-64	
N4663		.15	14.42	.20											613	640	
A1242+20				.27											1 0 10	27	
I3720				.19											1017	944	
I3718				.19											0 1 30	-73	
A1242+56				.23												-156	
N4650B				.45											956	957	
N4669				.23											0 3 37	1	
N4665	11.8	*	14.2	.20	*	*	*	*							6923*	6962	
N4666	11.43		12.0	.21	0.79	0.23	0.91	0.30	.65						1 1 35	39	
I3730	11.3	11.55	13.5	10.96	.03	.05	.03	.04	.11	1.70	.31*		1.40		5394	5449	
N4670	12.7	13.05	13.9	.19	0.39	-.49	*	*	.32						0 2 71	55	
N4668	12.90	.09	12.77	.21	.03	.04			-.53								
I3742	13.0	13.59	13.7	.19	.48	.07										-121	T
A1243-05	13.27	.11		.22								.78				-64	
N4673				.19								1 .01			1480	1339	
															1 0 10	-141	
															6991	6988	
															0 1 67	-3	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D/D ₀) Log D ₀ (12)	Log A _e m.e. (13)
N4675	12 43.3	55 0	124.77	62.5	SB.3*	3*	P048N			1.21	.46	1.10	
A1243+47	4.53	-32.6	62.38	11.4			1.5			.039	.038	1.12	
MK222	12 43.40	47 22.5	125.78	70.1									
N4674	12 43.46	-8 23.0	300.67	124.2	SBS0P5	0	P048C			1.28	.40	1.19	
	5.22	-32.6	54.19	-4.5			1.7			.052	.048	1.22	
N4672	12 43.5	-41 27	301.90	156.8	SAS3*	3*	P048B			1.28	.39	1.19	
	5.55	-32.6	21.14	-12.0			1.4			.105	.095	1.24	
A1243+71	12 43.69	71 35.6	123.61	45.7						.55	.00	.55	
MK223	3.86	-32.6	45.80	14.1						.050	.050		
N4676A	12 43.74	31 0.4	140.34	86.2	L...P5	-2	M082V			1.44	.63	1.29	
	4.89	-32.6	86.22	6.1			2.9			.040	.037	1.32	
N4676B	12 43.76	30 59.9	140.32	86.2	SBS0P.	0	M082V			1.33	.24	1.28	
	4.89	-32.6	86.22	6.1			3.1			.037	.034	1.30	
A1244+48	12 44.06	48 30.6	125.28	69.0	S...S.		P048C			.97	.49	.85	
N4674	4.65	-32.6	68.87	10.2						.039	.038	.87	
N4696A	12 44.2	-41 13.3	302.04	156.6	SBS1S.	1S	S030C			1.43	.49	1.31	
	5.55	-32.6	21.37	-11.8			1.6			.224	.105	1.37	
10818	12 44.2	30 0	144.76	87.2						1.12	.49	1.00	
	4.90	-32.6	87.20	6.0						.075	.100		
N4677	12 44.23	-41 18.8	302.05	156.7	L...+.	-1	P048C			1.46	.46	1.35	
	5.55	-32.6	21.28	-11.8			1.7		3 S	.316	.141	1.41	
N4686	12 44.4	54 46.2	124.45	62.7	S...1.	1	P048N			1.36	.49	1.25	
	4.52	-32.6	62.57	11.5			1.8			.039	.038	1.28	
A1244+26	12 44.48	26 50.2	242.00	90.3	L.A.-S.	-3	P048C			.90	.17	.87	
	4.93	-32.6	88.85	5.2			1.2			.050	.050	.90	
A1244+51	12 44.6	51 55	124.64	65.6	I.....	10*	P048N			1.16	.10	1.14	
	4.58	-32.6	65.47	11.0			1.8			.046	.045	1.15	
A1244+36	12 44.60	36 45.0	128.41	80.6	I...9..	10	P048F			1.30	.13	1.27	
D147	4.82	-32.6	80.60	7.7			9			.046	.045	1.28	
N4682	12 44.66	-9 47.4	301.24	125.6	SXT5..	5	P048C			1.45	.24	1.39	
	5.23	-32.6	52.80	-4.5	S 6	7*	2.2			.051	.041	1.41	
N4696B	12 44.7	-40 58	302.13	156.3	L...-*	-3*	P048C			1.34	.29	1.27	
	5.55	-32.6	21.63	-11.7			1.7			.224	.120	1.33	
N4684	12 44.71	-2 27.1	300.86	118.6	LBR...+	-1	W100V			1.46	.40	1.36	
	5.17	-32.6	60.13	-2.6			3.3	E7 K *	4	.043	.034	1.39	
N4679	12 44.8	-39 18.8	302.12	154.7	SAS4S.	4*	S030C			1.36	.27	1.30	
	5.53	-32.5	23.29	-11.3			1.7			.158	.105	1.34	
N4683	12 44.95	-41 15.5	302.19	156.6	L...-*	-3*	S030V			1.33	.47	1.22	
	5.56	-32.5	21.34	-11.7			1.5		3	.224	.105	1.28	
A1245+47	12 44.98	47 26.0	124.99	70.1									
MK225	4.66	-32.6	69.95	10.2									
N4687	12 44.99	35 37.5	128.68	81.8	E.1...	-5	P048C			1.07	.08	1.05	
MK442	4.83	-32.6	81.73	7.5			1.6			.041	.042	1.08	
10821	12 45.0	30 4	140.97	87.2	SXS4..	4	P048N			1.14	.00	1.14	
	4.89	-32.6	87.19	6.1			1.9			.039	.038	1.16	
A1245+72	12 45.00	72 11.2	123.44	45.1									
MK226	3.77	-32.6	45.21	14.3									
N4688	12 45.23	4 36.6	300.58	111.8	SBS6..	6	P048V			1.52	.03	1.51	
	5.12	-32.5	67.19	-6	S 7	7	2.6	B AF		.039	.032	1.53	
N4689	12 45.25	14 2.1	299.08	102.7	SAT4..	4	W100V	SD *F		1.60	.06	1.59	
	5.04	-32.5	76.61	2.0	S 4	3*	3.9	SD F	3VS	.034	.024	1.61	
A1245+27A	12 45.26	27 15.2	222.81	89.9	L...+/-	-2	P048C			1.21	.51	1.09	
	4.92	-32.5	89.16	5.5			1.5			.042	.045	1.12	
N4695	12 45.3	54 39	124.18	62.9	S.....		P048N			1.13	.20	1.08	
	4.52	-32.5	62.74	11.6			1.6			.039	.038	1.10	
N4696C	12 45.4	-40 32	302.27	155.9	S.S.5*	5*	P048C			1.31	.53	1.19	
	5.55	-32.5	22.06	-11.5			1.4			.141	.091	1.23	
N4692	12 45.48	27 29.8	205.75	89.7	E.2...	-5	P048C			1.14	.04	1.13	
	4.92	-32.5	89.21	5.6			1.8			.050	.050	1.16	
N4691	12 45.66	-3 3.5	301.36	119.2	RSBS0P.	0	P200V	R P*	2	1.51	.08	1.49	
	5.18	-32.5	50.53	-2.9	S N *		4.4	B F *		.038	.030	1.52	
N4696D	12 45.67	-41 26.7	302.34	156.8	L...+/-	-2*	S030V			1.31	.52	1.19	
	5.57	-32.5	21.16	-11.6			1.4			.316	.141	1.25	
N4696E	12 45.7	-40 39	302.33	156.0	L...+/-	-2	S030V			1.50	.53	1.38	
	5.56	-32.5	21.95	-11.4			1.7			.183	.091	1.44	
N4694	12 45.73	11 15.4	300.13	105.4	L.B...P.	-2	W100V	I GK*		1.56	.34	1.48	
	5.06	-32.5	73.84	1.4	E 5		3.6	n K	4	.042	.031	1.51	
N4698	12 45.86	8 45.6	300.58	107.8	SAS2..	2	W100V	S K	04	1.63	.24	1.57	1.10
	5.08	-32.5	71.35	.7	S 2	3*	3.8	S K		.027	.024	1.59	.04
A1245+27B	12 45.96	27 7.9	234.50	90.1	SB.1S/	1	P048C			1.15	.54	1.02	
	4.92	-32.5	89.27	5.6			1.3			.061	.058	1.04	
A1246+54	12 46.0	54 18	123.97	63.3									
	4.51	-32.5	63.09	11.7									
N4697	12 46.01	-5 31.7	301.64	121.6	E.6...	-5	P200V	E6 G		1.78	.20	1.74	1.35
	5.20	-32.5	57.06	-3.1	E 4		4.8	E6 K		.047	.029	1.77	.05
N4696	12 46.05	-41 2.3	302.41	156.4	E.1.P.	-4	C060C		4 S	1.55	.04	1.54	1.17
	5.57	-32.5	21.56	-11.4			3.4			.129	.105	1.61	.04
N4707	12 46.12	51 26.2	124.11	66.2	S.S.9..	9	P048N			1.37	.03	1.36	
D150	4.58	-32.5	65.96	11.2	S 9	9*	2.3			.039	.038	1.37	
A1246-04	12 46.13	-4 58.9	301.67	121.1	I...9..	10	P048F			1.22	.00	1.22	
D148	5.20	-32.5	51.51	-2.9			9			.061	.058	1.23	
A1246+34	12 46.18	34 44.8	127.37	82.7			2.0			.42	.00	.42	
MK444	4.83	-32.5	82.63	7.5						.075	.100		
13804	12 46.37	35 36.4	126.75	81.8	S.S.3*	3*	P048C			1.20	.21	1.15	
	4.82	-32.5	81.77	7.8			1.8			.038	.037	1.17	
13806	12 46.42	15 10.8	300.07	101.7	S...1S.	1S	P048C			1.22	.41	1.13	
	5.03	-32.5	77.77	2.6			1.6			.038	.035	1.15	
N4704	12 46.42	42 11.7	124.88	75.4	SBT4P.	4	P048C			1.08	.04	1.07	
	4.73	-32.5	75.20	9.3			1.7			.038	.036	1.09	
N4699	12 46.44	-8 23.6	301.93	124.4	SXT3..	3	W100V	SD *K	4*	1.55	.12	1.53	0.95
	5.22	-32.5	54.20	-3.8	S 0		3.8	DS K	4VS	.027	.020	1.55	.04
A1246+47	12 46.47	47 59.2	124.21	69.6						1.12	.74	.95	
MK229	4.64	-32.5	69.41	10.5						.075	.100		
N4700	12 46.51	-11 8.4	302.03	127.1	SBS5S/	5	W100V			1.48	.64	1.33	
	5.25	-32.5	51.46	-4.5	S *		3.1	S1 *4F*	3	.040	.031	1.35	
N4701	12 46.65	3 39.7	301.55	112.8	SAS6..	6	W100V	S FG		1.47	.08	1.45	0.95
	5.13	-32.5	66.26	-5	S N	-5*	3.7	S G	3VS	.034	.030	1.47	.05
A1246-41C	12 46.70	-41 31.1	302.55	157.0									
	5.58	-32.5	21.08	-11.4									

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log Ae m.e. (13)	
A1246-41A	12 46.70	-41 11.5	302.54	156.6	.L..P*/	-2	P048C							
	5.57	-32.5	21.41	-11.3										
N4703	12 46.72	-8 50.2	302.05	124.9	.S..3./	3	P048C			1.45	.62	1.30		
	5.23	-32.5	53.76	-3.8			1.9			.045	.039	1.32		
A1246-03	12 46.72	-3 44.8	301.91	119.9	.I..9..	10	P048F			1.20	.45	1.09		
D149	5.19	-32.5	58.85	-2.5			1.5			.061	.058	1.10		
A1246-09	12 46.78	-9 50.8	302.10	125.8	.SBS9..	9	W100V			1.60	.10	1.58		
	5.24	-32.5	52.75	-4.1	S 6	8*	3.9	S A		.044	.033	1.59		
N4705	12 46.84	-4 55.4	302.00	121.1	.SXS4S/	4	P048C			1.47	.40	1.38		
	5.20	-32.5	57.67	-2.7			2.1			.057	.050	1.40		
A1246-41B	12 46.88	-41 7.0	302.58	156.6	.L....	-2	P048C							
	5.57	-32.5	21.48	-11.3										
N4708	12 47.08	-10 49.3	302.25	126.8	.S..2P*	2	P048C			1.21	.13	1.18		
	5.25	-32.5	51.78	-4.2			1.9			.052	.042	1.20		
N4712	12 47.13	25 44.5	288.75	91.5	.SAS4..	4	W100V	S F *		1.42	.32	1.35		
	4.93	-32.5	88.29	5.5	S	7	3.3	S AF	3 S	.030	.023	1.37		
N4706	12 47.15	-41 0.5	302.63	156.5	.L....	-2	S030V			1.35	.39	1.26		
	5.57	-32.5	21.59	-11.2			1.6			.183	.100	1.32		
N4710	12 47.15	15 26.3	300.86	101.5	.LAR+S/	-15	W100V	S P*G		1.71	.57	1.57		
	5.02	-32.5	78.03	2.8	E 8		3.7	D *K *	3 S	.034	.026	1.59		
A1247-27	12 47.27	27 9.9	244.35	90.1	.E..1.*	-5*	P048C							
	4.91	-32.5	89.55	5.9										
A1247-03	12 47.3	3 8	301.98	113.3	.S.....		P048N			1.54	.58	1.41		
	5.13	-32.5	65.73	-5			2.1			.039	.038	1.43		
N4709	12 47.32	-41 6.7	302.67	156.6	.E..1..	-5	S030V			1.43	.04	1.42		
	5.58	-32.5	21.49	-11.2			2.0			.183	.100	1.49		
N4715	12 47.5	28 5	150.30	89.2	.LA....	-1	P048N			1.30	.06	1.29		
	4.90	-32.5	89.23	6.1			2.1			.051	.058	1.31		
N4713	12 47.42	5 35.0	301.95	111.0	.SXT7..	7	W100V	SB *AF	2	1.45	.17	1.41	0.95	
	5.11	-32.5	68.18	.2	S 5 K	5	3.5	S A	3 S	.031	.025	1.42	.05	
A1247-41	12 47.45	-41 14.8	302.69	156.7	.L.....	-2	P048C							
	5.58	-32.5	21.35	-11.2										
N4719	12 47.73	33 25.8	125.53	84.0	.SBS3..	3	P048N			1.26	.09	1.24		
	5.25	-32.5	83.96	7.5			2.0			.039	.038	1.26		
A1247-10	12 47.88	-10 35.1	302.56	126.6	.I..9..	10	P048F			1.53	.30	1.46		
D151	5.25	-32.5	52.01	-4.0			8			.061	.058	1.47		
N4718	12 47.96	-5 0.6	302.52	121.2	.SBR3S/	3	P048C			1.32	.41	1.22		
	5.20	-32.5	57.59	-2.5			1.8			.059	.054	1.24		
N4725	12 48.00	25 46.5	295.12	91.5	.SKR2P.	2	W100V	RS *G	4	2.04	.14	2.01		
	4.92	-32.5	88.36	5.7	SX3	1	4.7	SB GK	SVS	.027	.019	2.03		
N4728	12 48.03	27 42.4	157.98	89.6	.E..1..	-5	P048C			1.05	.06	1.03		
	4.90	-32.5	89.63	6.2			1.6			.050	.051	1.06		
A1248-52	12 48.2	52 24	123.30	65.3	.S..6*	6*	P048N			1.37	.81	1.18		
	4.53	-32.5	65.00	11.6			1.5			.039	.038	1.20		
N4724	12 48.28	-14 3.5	302.74	130.0	.E..5.*	-5*	P048C			1.19	.00	1.23		
	5.28	-32.4	48.54	-4.8			0.0			.224	.105	1.23		
N4750	12 48.33	73 8.8	123.08	14.6	RSAT2..	2	W050V	SDP*FG	3	1.36	.04	1.35		
	3.59	-32.5	44.25	14.6	S 0P		3.0	DSP GK	4VS	.034	.029	1.38		
N4727	12 48.34	-14 3.5	302.77	130.0	.SBR4S.	4	P048C			1.21	.07	1.19		
	5.28	-32.4	48.54	-4.8			1.9			.055	.047	1.21		
N4731	12 48.43	-6 7.3	302.75	122.3	.SBS5..	6	W060V			1.81	.28	1.74		
	5.21	-32.4	54.48	-3.1	SB5P	6*	3.7	BS AF		.025	.020	1.76		
A1248-28	12 48.47	28 6.8	132.31	89.3	.E..0...	-5	P048C							
	4.90	-32.4	89.28	6.4										
N4736	12 48.53	41 23.6	123.37	76.2	RSAR2..	2	P200C	S *G *	3	2.04	.08	2.02	1.205	
	4.73	-32.4	76.01	9.5	S 2P	3*	5.0	DS G	5	.026	.018	2.04	.04	
N4735	12 48.6	29 12	125.78	88.2						.87	.25	.81		
	4.88	-32.4	88.20	6.7						.075	.100			
N4733	12 48.61	11 11.0	302.67	105.7	.LA..*	-3	P048C			1.37	.04	1.36		
	5.06	-32.4	73.78	2.0			2.3			.066	.057	1.39		
N4734	12 48.68	5 7.9	302.80	111.5	.S..5.*	5*	P048C			1.08	.08	1.06		
	5.11	-32.4	67.73	.4			1.7			.037	.033	1.08		
N4738	12 48.7	29 4	125.26	88.4	.S..6S.	6S	P048N			1.36	.77	1.18		
	4.88	-32.4	88.33	6.7			1.5			.039	.038	1.19		
A1248-25	12 48.9	-25 51	302.98	141.5						1.34	.49	1.23		
	5.40	-32.4	36.75	-7.6						.075	.100			
N4745	12 48.9	27 42	127.23	89.7						.87	.00	.87		
	4.90	-32.4	89.70	6.4						.075	.100			
A1248-40	12 49.00	-40 51.8	303.01	156.4	.E..0.*	-5*	P048C							
	5.59	-32.4	21.74	-10.9										
N4739	12 49.02	-8 8.3	303.02	124.3	.E..1..	-5	P048C			1.24	.07	1.22		
	5.23	-32.4	54.46	-3.1			2.0			.071	.075	1.26		
N4742	12 49.20	-10 11.0	303.09	126.3	.E..4.*	-5*	W060V			1.37	.18	1.33		
	5.24	-32.4	52.42	-3.6	E 3		2.9	D K		.055	.039	1.37		
A1249-41	12 49.27	-41 11.6	303.06	156.7										
	5.59	-32.4	21.41	-10.9										
N4747	12 49.31	26 2.8	305.95	91.3	.SB6S/P	6*	P200C	S P*F *		1.56	.40	1.47		
	4.91	-32.4	88.64	6.1	P 2 T		3.8			.032	.024	1.48		
N4749	12 49.39	71 54.4	122.96	45.4	.S..3S/	3S	P048C			1.29	.61	1.15		
	3.67	-32.4	45.49	14.6			1.5			.038	.035	1.18		
N4746	12 49.41	12 21.4	303.39	104.6	.S..3*/	3*	P048C			1.39	.56	1.26		
	5.05	-32.4	74.96	2.5			1.8			.037	.034	1.28		
N4743	12 49.50	-41 7.5	303.11	156.7										
	5.60	-32.4	21.47	-10.8										
N4744	12 49.58	-40 47.4	303.13	156.3	.SB.0..	0	P048C							
	5.59	-32.4	21.81	-10.7										
N4754	12 49.78	11 35.1	303.71	105.4	.LBR..*	-3	W100V			1.67	.26	1.61	1.00	
	5.05	-32.4	74.18	2.4	E T *		3.9	D K	3	.030	.026	1.64	.05	
N4753	12 49.80	-0 55.7	303.43	117.4	.I..0...	0	W100V	E P	2	1.73	.27	1.67	1.20	
	5.16	-32.4	61.67	-1.0	S N.		4.0	D P G	3ES	.032	.024	1.70	.03	
A1250-06	12 50.02	-6 1.2	303.47	122.3	.I..9..	10	P048F			1.27	.00	1.27		
	5.21	-32.4	56.58	-2.3	I	9	2.1			.061	.058	1.28		
A1250-40	12 50.1	-40 11	303.23	155.7	.SAT5..	5	P048C							
	5.59	-32.4	22.42	-10.5										
N4757	12 50.23	-10 2.3	303.51	126.2	.L....	-2	W100V			1.26	.59	1.12		
	5.25	-32.4	52.56	-3.3						.065	.058	1.15		
N4756	12 50.25	-15 8.6	303.45	131.2	.S..0S.	0S	P048C			1.30	.07	1.28		
	5.29	-32.4	47.46	-4.6	E 2		2.1			.058	.051	1.31		
N4758	12 50.25	16 7.2	304.54	101.0	.SBS3P/	3	PG48C			1.50	.56	1.37		
	5.01	-32.4	78.72	3.7			2.3			.037	.035	1.39		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _H m.e. (28)	V ₀ ΔV (29)			
A1246-41A		*		.46	*	*										-235	T	
N4703				.23												-150		
A1246-03				.22												-131		
A1246-09	12.5			.23												-153		
N4705	12.10		14.7	.22												-136		
A1246-41B		*		.46	*	*									3741	3506	T	
N4708				.23											0 1 37	-235		
N4712	12.9	13.59		.19	.58				.45						4461	4453	T	
N4706	12.86	.11	14.7	13.12	.07				.90						0 2 85	-8	T	
N4710		13.8		.46	1.06	.52			.41						3678*	3444	T	
		.15	14.4	13.21	.06	.07	*		.70						0 2 19	-234	PT	
	12.0	11.80		.19	0.83										1129	1076		
	11.67	.09	13.8	11.25	.05										0 2 24	-53		
A1247-27				.19											7429	7427		
A1247-03				.20											0 1 67	-2		
N4709				.46											4624*	4390	T	
N4715				.19											0 2 17	-234		
N4713	12.3	12.2	12.4	.20	0.42	-.27	0.45	-.24	.34						6922	6923		
	12.20	.1	13.9	11.86	.04	.04	.04	.04	-.33						0 1 70	1	P	
															664	570		
A1247-41		*		.47	*	*									0 1 58	-94		
N4719				.19											2644	2409	T	
A1247-10				.23											0 1 52	-235		
N4718				.22								1.24			7105	7130		
												1 .01			0 1 100	25		
N4725	10.8	9.95		.19	0.74	*			.66						2408	2253		
	9.87	.09	14.6	9.64	.04										1 0 15	-155		
N4728				.19											1138	1131	PST	
															0 2 57	-7		
A1248-52				.22											6522	6522		
N4724				.24											0 1 67	0		
N4750	12.2			.31												105		
N4727	12.26		13.8	.24											1518	1698	PT	
															0 1 60	180	S	
N4731	12.2			.22												-167		
A1248-28	11.55		14.7	.19								1.72			1490*	1351		
												1 .01			1 1 10	-139		
N4736	9.0	8.85	10.3	.20	0.75	0.16	0.79	0.25	.69	1.40	.785		4.53		7468	7470	S	
N4735	8.62	.08	13.7	8.58	.03	.05	.04	.03	.11	1 3 2	.78*				0 3 51	2	PT	
N4733				.19											1 7 5	60		
				.20											6677	6684	P	
															0 1 150	7		
N4734				.20												-70		
N4738				.19						1.78*	1.335					-95		
										1 1 2	.84*				4600	4607		
A1248-25				.30											0 1 70	7		
N4745				.19												-201		
A1248-40		*		.46	*	*									7181	7182	T	
N4739				.23											0 1 70	1		
N4742	11.9	12.1		.23	1.01				.95						2221	1988		
A1249-41	11.92	.15	13.5	11.85	.06										0 1 25	-233		
				.46												-146		
N4747	12.7	13.01		.19	.63				.50						1321	1168	T	
N4749	12.48	.11	14.7	12.49	.07							1.11			0 1 50	-153		
				.30								1 .02	1.27		3739	3505	PT	
															0 1 57	-234		
				.19											1197	1192		
N4746				.46											1 1 15	-5		
N4743				.46												176		
N4744		*		.46	*											-65		
N4754	12.0	11.445	11.9	.20	0.95	0.50	0.98	0.55	.88						3014	2781	T	
N4753	11.42	.08	14.0	11.17	.03	.04	.03	.03	.45						0 1 35	-233		
	10.5	10.85	12.3	.21	0.95	0.48	0.99	0.54	.85						3358	3125	T	
	10.50	.08	13.7	10.43	.02	.03	.02	.03	.39						0 1 16	-233		
A1250-06				.22											1461	1393	PST	
A1250-40				.45											0 1 75	-68		
N4757				.23											1255	1137		
N4756	13.3			.25											0 2 68	-118		
N4758	13.16		14.3	.19											1531	1394		
															1 0 30	-137		
															3840	3609		
															0 1 50	-231		
																-152		
																-169		
																-48		

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log Do (12)	Log Ae m.e. (13)	
N4767A	12 50.3	-39 35	303.28	155.2	.S..95/	95	P048C			1.12	.48	1.01		
	5.58	-32.4	23.02	-10.4			1.0			.158	.105	1.04		
A1250+10	12 50.4	10 16	304.18	106.7	.S..2..	2	P048N			1.32	.20	1.27		
	5.06	-32.4	72.86	2.2			2.0			.039	.038	1.29		
N4762	12 50.42	11 30.1	304.28	105.5	.LBRO3/	-2	W100V	D GK	3	1.94	.73	1.77	1.15	
	5.05	-32.4	74.10	2.5	S NT.*		4.0	D K	4VS	.029	.023	1.80	.04	
N4760	12 50.52	-10 13.4	303.62	126.4	.E.0.5.	-55	W100V			1.26	.01	1.76		
	5.25	-32.4	52.37	-3.3	E 2		3.3	D K		.100	.051	1.30		
N4766	12 50.53	-10 6.4	303.63	126.3	.L.../	-2	W100V			1.20	.63	1.05		
	5.25	-32.4	52.49	-3.2			2.6			.067	.062	1.08		
N4765	12 50.70	4 44.1	304.11	112.0	.S..05.	05	P048C			1.16	.12	1.13		
	5.11	-32.4	67.33	.8	S *		1.8	E4P*		.036	.032	1.15		
N4774	12 50.8	37 5	120.87	80.6	.RING*	10R	M082V			.79	.18	1.76		
	4.77	-32.4	80.31	9.0			2.0			.075	.100	.76		
N4771	12 50.80	1 32.4	304.04	115.1	.SA.75/	75	W100V	SD *F		1.60	.59	1.46		
	5.14	-32.4	64.14	-1	S 3	5	3.4	S *G *	1	.031	.025	1.47		
N4763	12 50.81	-16 44.0	303.63	132.8	.S..1*.	1*	P048C			1.23	.12	1.20		
	5.31	-32.4	45.86	-4.9	S 0		1.9			.055	.048	1.23		
N4772	12 50.93	2 26.4	304.15	114.3	.SAS1..	1	W060V			1.52	.29	1.45		
	5.13	-32.4	65.04	.2	S 0		3.1	S K	03	.034	.029	1.47		
N4773	12 51.00	-8 22.0	303.85	124.7	.E.4.P*	-5	P048C			1.31	.02	1.31		
	5.23	-32.4	54.23	-2.7			2.2			.224	.105	1.35		
N4767	12 51.13	-39 27.0	303.45	155.1	.E.5...-	-5	S030V			1.42	.27	1.36		
	5.58	-32.3	23.15	-10.2			1.8			.224	.120	1.43		
N4775	12 51.18	-6 21.2	303.98	122.7	.SAS7..	7	W060V	S A	2	1.35	.02	1.34		
	5.21	-32.3	56.24	-2.1	S S K -	5	3.0	S F	3VS	.031	.025	1.36		
N4779	12 51.3	10 0	304.90	107.0	.SBT4..	4	P048N			1.36	.06	1.35		
	5.06	-32.3	72.59	2.3			2.2			.039	.038	1.37		
A1251-11	12 51.33	-11 50.2	303.91	128.1	.I..9..	10	P048N			1.34	.34	1.26		
D153	5.26	-32.3	50.76	-3.5	\$		1.9			.046	.045	1.27		
N4777	12 51.37	-8 30.3	304.01	124.8	.SAS1*.	1	P048C			1.37	.27	1.31		
	5.23	-32.3	54.09	-2.6			2.0			.057	.050	1.34		
I0832	12 51.4	26 43	341.17	90.8										
	5.90	-32.3	89.13	6.7										
N4780	12 51.47	-8 21.1	304.05	124.7	.SXT5..	5	P048C			1.33	.17	1.29		
	5.23	-32.3	54.24	-2.5			2.1			.051	.042	1.31		
N4789A	12 51.66	27 25.5	35.59	90.1	.IBS9..	10	P048C			1.44	.10	1.41		
D154	4.89	-32.3	89.41	6.9	I	8	2.4			.046	.045	1.42		
N4781	12 51.78	-10 15.9	304.13	126.6	.SBT7..	7	W060V	SI *A	2	1.55	.30	1.48		
	5.25	-32.3	52.33	-3.0	S S K	4	3.2	SI *A		.033	.023	1.50		
N4789	12 51.88	27 20.3	27.66	90.2	.LA....	-2	P048C			1.23	.10	1.21		
	4.89	-32.3	89.36	6.9			1.9			.067	.062	1.24		
N4786	12 51.95	-6 35.3	304.32	123.0	.E.3.P.	-5	P048C			1.31	.12	1.28		
	5.22	-32.3	56.00	-2.0	E 2P		2.1	D K		.100	.049	1.31		
N4782	12 51.98	-12 18.1	304.15	128.5	.E.0.P.	-5	W100V			1.19	.00	1.19	0.75	
	5.27	-32.3	50.29	-3.5	E 0 T **		3.2	D *K		.112	.057	1.23	.04	
N4783	12 51.99	-12 17.4	304.15	128.5	.E.0.P.	-5	W100V			1.22	.01	1.22	0.85	
	5.27	-32.3	50.30	-3.5	E 0 T **		3.2	D K		.112	.057	1.26	.05	
N4767B	12 52.0	-39 35	303.64	155.2	.SBS75..	75	S030V			1.19	.04	1.18		
	5.59	-32.3	23.01	-10.0			1.6			.158	.100	1.21		
N4784	12 52.01	-10 20.6	304.22	126.7	.L.../	-2	W060V			1.25	.63	1.10		
	5.25	-32.3	52.25	-2.9			2.2			.061	.051	1.13		
A1252+13	12 52.2	13 30	306.24	103.7	.S.....		P048N			1.46	.52	1.34		
	5.03	-32.3	76.08	3.5			2.0			.039	.038	1.36		
N4793	12 52.23	29 12.5	101.74	88.4	.SXT5..	5	W100V	S P FG*	4	1.46	.24	1.40	1.10	
	4.86	-32.3	88.06	7.4	S 5	5	3.5		4VS	.032	.026	1.42	.1	
N4790	12 52.26	-9 58.6	304.33	126.3	.SBT55*	5	W060V			1.26	.15	1.22		
	5.25	-32.3	52.61	-2.8	S S K	5*	2.7	SI *AF	3	.040	.030	1.24		
N4810	12 52.30	2 54.7	304.99	113.9	.I..9P.	10	P200V			.92	.18	.88		
	5.13	-32.3	65.50	.7			3.1			.035	.032	.89		
N4809	12 52.30	2 55.5	305.00	113.9	.I..9P.	10	P200V			1.27	.36	1.18		
	5.13	-32.3	65.51	.7			3.6			.034	.029	1.19		
N4800	12 52.33	46 48.0	121.29	71.0	.SAT3..	3	W060V	DSF*K	4	1.25	.11	1.23		
	4.60	-32.3	70.59	11.3	S		2.8			.035	.031	1.25		
N4792	12 52.45	-12 13.7	304.33	128.5	.L.../	-2	W100V			1.02	.16	.98		
	5.27	-32.3	50.36	-3.3			2.7		3 S	.224	.112	1.01		
N4795	12 52.52	8 20.3	305.67	108.7	PSBR1PS	1	P048C			1.23	.06	1.21		
	5.08	-32.3	70.92	2.2	S NT.*		2.0			.036	.033	1.23		
N4794	12 52.56	-12 20.4	304.37	124.6	.SBT1..	1	W100V			1.37	.32	1.29		
	5.27	-32.3	50.25	-3.3			3.2		4 S	.056	.048	1.32		
N4798	12 52.57	27 41.0	52.91	89.9	.L...-.	-3*	P048C			1.12	.12	1.09		
	4.88	-32.3	89.16	7.2			1.7			.051	.053	1.12		
I3896A	12 52.6	-49 49	303.60	165.5	.SB.7*	7	S030V			1.10	.12	1.07		
	5.79	-32.3	12.78	-11.9			1.8			.158	.105	1.12		
A1252+00	12 52.65	0 23.2	305.02	116.4	.SBS7..	7	W100V			1.51	.19	1.47		
	5.15	-32.3	62.97	.1	N *		3.6	S AF	3VS	.035	.030	1.48		
N4807	12 53.1	27 47	56.12	89.8	.LX.-P*	-3	P048C			1.08	.09	1.06		
	4.88	-32.3	89.01	7.3			1.6			.042	.045	1.09		
N4807A	12 53.1	27 48	57.01	89.8	.E.5.5.	-55	P048C			.70	.52	.58		
	4.88	-32.3	89.01	7.3			.5			.050	.050	.61		
N4802	12 53.22	-11 47.2	304.64	128.1	.LA..S.	-2	P048C							
	5.27	-32.3	50.80	-3.0										
N4814	12 53.24	58 36.9	121.94	59.1	.SAS3..	3	W060V	S G	2	1.51	.12	1.49		
	4.29	-32.3	58.78	13.4	S 3P	3*	3.3		4 S	.035	.030	1.51		
N4808	12 53.28	4 34.4	305.76	112.4	.SAS6*	6	W100V	SI *AF		1.43	.33	1.35		
	5.11	-32.3	67.15	1.4	S S K	5	3.3	SI *AF*	3VS	.031	.025	1.37		
I3900	12 53.28	27 31.3	40.56	90.1	.LB...*	-2	P048C			.81	.08	.79		
	4.88	-32.3	89.04	7.3			1.1			.075	.100	.82		
A1253+27	12 53.68	27 56.8	61.09	89.7										
MK 53	4.87	-32.3	88.83	7.5										
I3896	12 53.7	-50 3	303.78	165.7	.E.1...-	-5	S030V			1.34	.04	1.33		
	5.81	-32.3	12.54	-11.8			2.4			.224	.105	1.44		
N4816	12 53.8	28 1	63.42	89.7	.L...-.	-3*	P048N			1.20	.07	1.18		
	4.87	-32.3	88.77	7.5			1.9			.071	.071	1.21		
N4819	12 54.05	27 15.4	26.02	90.4	PSXR1S.	1	P048C			1.07	.08	1.05		
	4.88	-32.3	88.87	7.4			1.6			.050	.050	1.07		
N4821	12 54.07	27 13.6	24.55	90.4	.E.4.*.	-5*	P048C			.84	.21	.79		
	4.88	-32.3	88.86	7.4			1.0			.050	.050	.82		
A1254+57	12 54.08	57 8.6	121.62	60.6	.SAT55P	5*	P048C			1.24	.17	1.20	0.055	
MK231	4.33	-32.3	60.24	13.3			1.9			.050	.050	1.22	.05	

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	V ₀ ΔV (29)	
N4767A				.44												
A1250+10				.20												-230
N4762	11.8	11.125	12.4	.20	0.90	0.40	0.92	0.44	.78						945	-73
N4760	11.03	.08	13.9	10.61	.05	.06	.02	.02	.30						0 3 27	878
N4766	12.5			.23						1.94	.535				4398	-67
N4766	12.45		13.7	.23						1 2 3	.53				0 1 270	4246
																-152
N4765	12.9			.20												-95
N4774	13.27		13.6	.20	0.50	-.10	*	*	.36						8435	8478
N4771	12.45	14.85	13.2	14.47	.05	.04			-.20						0 1 92	43
N4763	12.9	.09	14.1	.21												-108
N4763	12.70			.25												-173
N4772	13.2		14.0	.21												-104
N4772	13.30		14.1	.21												
N4772	12.6			.23												
N4772	12.40			.44												
N4773				.23												
N4767	12.8		13.8	.22	*										3140	-145
N4775	12.39	*		.22											0 1 41	2910
N4775	11.6		13.3	.20											1547	-230
N4779	11.74			.24											0 1 49	1409
				.23												-138
A1251-11				.23									1.13		825	-73
N4777				.19									1 .02		1 0 10	668
I0832				.23												-157
N4780				.19											7001	-145
N4780				.23											0 1 150	7000
N4789A				.19												-1
N4781	11.7	*	13.5	.23	*	*							1.51		374	-145
N4781	11.69			.19					.94				2 .01		2 0 9	375
N4789	13.1	.15	13.9	12.74	1.07										895	1
N4786	12.7		13.8	.22						1 0 0					0 1 62	744
N4782	12.57		12.0	.24												-151
N4782	12.9*		12.5	.24	1.02	0.61	1.03	0.66	.93							8373
V201	12.57	.07	13.7	12.45	.1	.04	.1	.03	.57	*					0 1 49	1
N4783	12.7*	.08	12.5	.24	0.96	0.55	0.98	0.60	.86							-138
V201	12.37		13.9	12.49	.04	.06	.02	.03	.52	2.87*	.73		-3.065		4017	3859
N4767B				.44						19 712	.82				0 3 16	-158
																-158
N4784				.23												-229
A1252+13				.19												
N4793	12.5	12.3	13.3	.19	0.65		0.72		.55	1.08*	.67*					-151
N4793	12.45	.2	13.8	11.90	.05	.06				2 1 0			2.015		2472	-58
N4790	12.5			.23											0 1 60	2481
N4810	12.81		13.6	.20												9
V313				.20											881	-150
N4809				.20											0 1 95	780
V313				.21												-101
N4800	12.0	12.3	13.1	12.00	.24										940	839
N4792	12.44	.15		.24											0 1 95	-101
N4795				.20											746	831
N4794	13.1		14.0	.24											0 1 50	85
N4794	13.18			.19												-158
N4798				.19												-79
I3896A	14.2	.15	14.4	13.87	1.06				.94							-158
				.71	.06										7673	7676
A1252+00	12.9			.21											0 1 50	3
N4807	12.55		14.5	.19												-243
N4807A				.19											6871	-111
N4802				.24											0 1 70	6875
N4814	12.3	12.8	14.9	.24											7144	7148
N4808	12.04	.15		.20											0 1 70	4
I3900	12.56		13.7	.19												-155
A1253+27				.19												2531
I3896				.72	*	*									0 1 65	2662
N4816	12.63	*	14.2	.19											0 1 70	131
N4819				.19									1.40		773	679
N4821				.19									1 .01		1 1 10	-94
A1254+57				.24											7171	7174
72490	14.3		10.0	13.86	0.72	0.15	0.85	0.10	.55						0 1 50	3
	.2		14.9		.05	.05	.05	.03	.03						4827	4832
															0 1 105	5
															6878	-243
															0 1 70	6883
															6696	6698
															0 1 67	2
															6974	6976
															0 1 67	2
															12430*	12556
															0 2 78	126

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D ₀) Log D ₀ (12)	Log Ae m.e. (13)	
N4835A	12 54.2	-46 7	303.95	161.8	.S...*/		S030V							
N4818	5.73	-32.2	16.47	-11.0										
N4826	12 54.21	-8 15.2	305.22	124.8	.SX52..	2	P048C	B *G *	4	1.65	.41	1.55		
	5.23	-32.2	54.32	-1.9	SX N *		2.5	S P FG	3*	.039	.028	1.57		
N4827	12 54.28	21 57.1	315.70	95.6	RSAT2..	2	W060V		5	1.97	.24	1.92	1.38	
	4.94	-32.2	84.42	6.1		-3	P048C			.027	.019	1.94	.04	
N4827	12 54.31	27 26.9	35.66	90.2	.L...-		2.0			1.23	.06	1.22		
	4.87	-32.2	88.82	7.5						.049	.047	1.25		
I0835	12 54.5	26 45	5.36	90.9						.79	.00	.79		
	4.88	-32.2	88.61	7.3						.075	.100			
A1254+32.	12 54.53	32 43.2	110.67	85.1	.S..S.	55	P048C			.88	.20	.83		
MK 54	4.81	-32.2	84.55	8.7			1.1			.061	.058	.85		
N4825	12 54.57	-13 23.6	305.08	129.8	.LA...-	-3	W100V	D K	03	1.31	.14	1.28		
	5.29	-32.2	49.18	-3.2	E 2P		3.3			.091	.045	1.31		
N4837	12 54.6	48 34	120.44	69.3	.P.....		P048N			1.16	.32	1.08		
	4.54	-32.2	68.81	12.0			1.6			.039	.038	1.11		
N4839	12 54.99	27 46.0	48.80	90.0	.LA...-	-3	P048C			1.62	.30	1.55		
	4.87	-32.2	88.62	7.7			2.5			.067	.059	1.58		
A1255+27A	12 55.00	27 40.6	45.10	90.1										
MK 55	4.87	-32.2	88.64	7.7										
N4841A	12 55.12	28 44.8	78.29	89.0	.LA..P.	-2	P048C			1.24	.00	1.24		
	4.85	-32.2	88.09	8.0			2.1			.066	.056	1.27		
N4841.	12 55.13	28 44.9	78.28	89.0	.LA..P.	-2	P048C			1.28	.06	1.27		
	4.85	-32.2	88.09	8.0						.050	.050	1.30		
N4840	12 55.13	27 52.8	52.83	89.9	.E..1..	-5*	P048C			.75	.00	.75		
	4.86	-32.2	88.56	7.8			1.1			.075	.100	.78		
N4841B	12 55.15	28 45.1	78.26	89.0	.E..0..	-5	P048C			1.12	.00	1.12		
	4.85	-32.2	88.09	8.0			1.8			.066	.058	1.15		
N4842A	12 55.18	27 45.8	48.22	90.0	.E..0...	-5	P048C			.75	.12	.72		
	4.87	-32.2	88.58	7.7			1.0			.050	.050	.75		
N4842.	12 55.18	27 45.4	48.05	90.0	.E..0...	-5	P048C							
N4842B	4.87	-32.2	88.58	7.7						.64	.17	.60		
A1255+59	12 55.19	59 20.2	121.52	58.4	.E..3..	-5*	P048C			.050	.050	.63		
MK232	4.24	-32.2	58.05	13.7			.7							
A1255+02	12 55.20	2 57.8	306.75	114.0	.S..9..	9	P048N			1.15	.03	1.14		
D156	5.13	-32.2	65.52	1.4	I	9	1.8			.046	.045	1.15		
N4835	12 55.3	-45 59	304.15	161.7	.SXT4*	3	R074V			1.53	.53	1.41		
	5.73	-32.2	16.60	-10.7			3.1		4	.077	.048	1.46		
A1255+28	12 55.38	28 9.1	61.42	89.6	.E..3..	-55	PG48C			.75	.00	.75		
	4.86	-32.2	88.40	7.9			1.4			.075	.100	.78		
N4845	12 55.47	1 50.8	306.75	115.1	.SAS2./	2	W060V	SD *FG	03 S	1.70	.50	1.58		
	5.14	-32.2	64.40	1.2	S 3	5	3.3	S G *		.031	.024	1.60		
A1255+27B	12 55.6	27 8	23.08	90.6	.S..0..	0	P048N			1.12	.26	1.06		
	4.87	-32.2	88.51	7.7			1.6			.039	.038	1.08		
A1255+15	12 55.67	15 7.8	310.54	102.3	.IXS9*	10	P048C			1.32	.52	1.20		
D157	5.01	-32.2	77.63	4.7	S	7*	1.7			.052	.050	1.21		
N4848	12 55.68	28 30.7	70.40	89.3	.S..1*/	1*	P048C			1.26	.50	1.14		
	4.85	-32.2	88.15	8.0			1.6			.038	.036	1.16		
A1255+24	12 55.74	24 36.9	331.92	93.1										
MK447	4.90	-32.2	86.83	7.1										
N4849	12 55.79	26 40.0	7.52	91.1	.L...*	-3*	P048C			1.34	.12	1.31		
	4.88	-32.2	88.32	7.6			2.1			.050	.050	1.34		
A1255+03	12 55.82	3 3.7	307.13	114.0	.SBS8..	8	P048N			1.23	.05	1.22		
D158	5.13	-32.2	65.61	1.6	SR	8	2.0			.039	.038	1.23		
N4850	12 55.95	28 14.3	62.03	89.6	.LA....	-2	P200R			1.20	.00	1.20		
	4.86	-32.2	88.25	8.0			3.8			.073	.085	1.23		
A1256+14	12 56.17	14 29.2	310.73	103.0	.I...9..	10	P048N			1.08	.04	1.07		
D155	5.01	-32.2	76.98	4.7	I	9	1.7			.039	.038	1.08		
A1256+27A	12 56.17	27 32.0	38.21	90.3	.L...P5	-2*	PG48C							
MK 56	4.86	-32.2	88.40	7.9										
N4853	12 56.17	27 51.9	49.74	89.9	PLA...S.	-3	P048C			1.07	.05	1.06	0.60	
	4.86	-32.2	88.35	8.0			1.7			.041	.043	1.09	.06	
A1256+27B	12 56.21	27 26.8	35.09	90.3	.L...P5/	-2*	PG48C							
MK 57	4.87	-32.2	88.40	7.9										
A1256+09	12 56.3	9 55	308.97	107.4	.S.....		P048N			1.08	.26	1.02		
	5.06	-32.2	72.43	3.5			1.5			.039	.038	1.04		
N4854	12 56.37	27 56.6	51.85	89.9	.LB....	-2	P200R							
	4.86	-32.2	88.28	8.0										
A1256+59	12 56.39	59 24.2	121.23	54.3										
MK233	4.22	-32.2	57.97	13.9										
I3946	12 56.41	28 4.7	55.91	89.7	.LA.../	-2	P200R			.98	.32	.90		
	4.86	-32.2	88.23	8.1			3.1			.042	.045	.93		
I3947	12 56.45	28 3.2	55.06	89.8	.LA....	-2	P200R							
	4.86	-32.2	88.23	8.1										
I3949	12 56.53	28 6.0	56.23	89.7	.LA..P/	-2	P200R			1.10	.73	.93		
	4.86	-32.2	88.19	8.1			2.9			.042	.045	.96		
N4859	12 56.6	27 5	22.83	90.7	.S..0..	0	P048N			1.22	.32	1.14		
	4.87	-32.2	88.28	7.9			1.7			.050	.050	1.16		
N4858	12 56.63	28 23.2	63.79	89.4	.SB.3..	3	P200R			.55	.06	.54		
	4.85	-32.2	88.05	8.2			2.5			.061	.058	.56		
N4860	12 56.66	28 23.6	63.86	89.4	.E..2..	-5*	P048C			.98	.05	.97	0.50	
	4.85	-32.2	88.04	8.2			1.5			.075	.100	1.00	.09	
N4861	12 56.66	35 7.9	111.54	82.8	.SBS9*	9*	W060V	I *A		1.61	.40	1.52		
MK 59	4.76	-32.2	82.10	9.7	I	8	3.2	I P A *		.038	.030	1.53		
A1256+27C	12 56.67	27 54.8	50.27	89.9	.SB.1..	1	P200R			.78	.04	.78	0.35	
MK 58	4.86	-32.2	88.23	8.1			2.9			.061	.058	.80	.04	
I3955	12 56.69	28 15.9	60.42	89.6	.LA....	-2	P200R							
	4.85	-32.2	88.09	8.2										
N4856	12 56.70	-14 46.3	305.78	131.2	.SBS0..	0	W060V	B *K	3	1.66	.46	1.55		
	5.31	-32.2	47.79	-3.0	SX0		3.2	D K	03 S	.031	.025	1.58		
I3960	12 56.71	28 7.4	56.44	89.7	.LB....	-2	P200R			.60	.00	.60		
	4.85	-32.2	88.15	8.1			2.6			.075	.100	.63		
I3959	12 56.72	28 3.2	54.38	89.8	.E..3...	-5	P200R			.075	.100	.75		
	4.86	-32.2	88.17	8.1			2.9			.075	.100	.78		
N4864	12 56.80	28 14.8	59.61	89.6	.E..2...	-5	P200R			0.80	.20	0.75		
	4.85	-32.2	88.08	8.2			2.8			.075	.100	.78		
N4868	12 56.80	37 34.8	114.34	80.4	.SA.35.	3	P048C			1.22	.02	1.22		
	4.72	-32.2	79.69	10.2	S 4	3*	2.0			.046	.043	1.24		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) _T (23)	Log S _R N _H N _H N _H (24)	α ₄ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N4835A				.58											-238	
N4818	12.1 11.89		14.0	.23											-142	
N4826	8.0* 9.21	9.35 .07	11.7 13.4	.19 .96	0.84 .03	0.21 .05	0.87 .03	0.28 .03	.75 .13	1.70 2 1 2	1.40 1.925	1.32 2 .01	3.39 4.31	397 2 2 12	377 -20	PT
N4827		13.9 .15	14.8	.19 13.58	.95 .06				.83	1 0 0				7650 0 1 67	7653 3	
10835				.19										7774 0 1 72	7774 0	
A1254+32. ZC6		15.2 .15	13.9	.19 14.78	.27 .06				.10					13432 0 2 40	13458 26	
N4825	12.9 12.74	13.1 .15	14.2	.24 .22	1.04 .06	.58 .07										
N4837				.19										8740 0 1 105	-160 8833	
12 46				.19						.90* 2 1 1	.71* .925			7446 0 1 67	7451 5	
N4839				.19										4884 0 1 105	4889 5	
A1255+27A				.19												
N4841A				.19												
N4841.		12.5 .15	13.6	.19 12.19	1.03 .06				.92					6720 0 1 70	6729 9	P
N4840				.19										6059* 0 2 72	6065 6	P
N4841B				.19												
N4842A				.19												
N4842.				.19										7512 0 1 67	7517 5	
N4842B				.19												
A1255+59				.24										6660 0 1 100	6795 135	
A1255+02				.20								.56 1 .01		927 1 0 70	828 -99	
N4835	12.5 12.53		13.7	.58										2188 0 2 35	1951 -237	P
A1255+28				.19										6075 0 1 105	6082 7	S
N4845	12.6 12.17		14.3	.21												
A1255+27B				.19										5700 0 1 80	5703 3	
32 68				.19												
A1255+15				.19												
N4848				.19						1 0 0				7209 0 1 66	7218 9	
A1255+24				.19										6657 0 2 71	6650 -7	
N4849				.19										5931* 0 2 49	5932 1	
A1255+03				.20										2726 1 0 100	2628 -98	
N4850		*		.19	*	*	*	*						5984 0 1 100	5992 8	
A1256+14		14.50 .13	14.6	.19 14.27	*	*	*	*				.61 1 .01	.77	222 1 1 9	171 -51	
A1256+27A				.19										7325 0 2 42	7330 5	
N4853		14.0 .13	12.5 14.1	.19 13.69	0.89 .04		0.91 .04		.77					7550 0 1 50	7556 6	
22 67				.19										7642 0 3 38	7646 4	
A1256+27B				.19												
A1256+09				.20												
N4854				.19										8077 0 1 70	8084 7	
A1256+59				.24										8430 0 1 100	8566 136	
I3946		15.0 .1	14.0	.19 14.59	1.07 .04		*		.94					6101 0 1 75	6108 7	
I3947				.19										5730 0 1 72	5737 7	
I3949				.19										7526 0 1 84	7533 7	
N4859				.19										7055 0 1 70	7058 3	
N4858				.19										9386 0 1 67	9395 9	
N4860		14.45 .09	12.4 14.2	.19 14.14	1.0 .1		1.0 .1		.88					7862 0 2 34	7871 9	
N4861	12.7 12.41	12.8 .13	14.7 12.4	.20 .19	0.58 .04		*		.44			1.27 1 .02	1.13	831 1 4 8	869 38	P
A1256+27C		15.20 .08	12.4 13.8	.19 14.91	.04 .19	-.11 .05	0.49 .05	-.06 .05	.36 -.14					5381 0 1 70	5388 7	
I3955				.19										7895 0 1 72	7903 8	
N4856	11.4 11.42	11.4 .1	13.4	.25 10.81	0.97 .03		*		.83	1.75* 1 1 0	1.665		1.425	1251 0 1 75	1088 -163	
I3960				.19										6709 0 1 72	6717 8	
I3959				.19										7121 0 1 72	7128 7	
N4864		14.5 .15	13.0	.19 14.21	.94 .06				.83					6819 0 1 125	6827 8	
N4868	13.1 13.14		14.0	.20												48

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D(0) Log D ₀ (13)	Log A _e m.e. (14)
I3963	12 56.81 4.85	28 2.7 -32.2	53.92 88.16	89.8 8.2	.LA.../ -2	P200R 2.7				.81 .075	.32 .100	.74 .77	
N4867	12 56.84 4.85	28 14.4 -32.2	59.32 88.07	89.6 8.2	.E.3... -5	P200R 3.5				1.04 .075	.00 .100	1.04 1.07	
N4865	12 56.92 4.85	28 21.2 -32.2	62.04 88.01	89.5 8.2	.E.6... -5	P200R 3.5				1.15 .051	.25 .053	1.09 1.12	0.55 .05
N4866	12 56.96 5.01	14 26.5 -32.1	311.55 76.91	103.1 4.8	.LAR+*/ S 2	W100V 5*				1.81 .036	.62 .029	1.66 1.68	
N4869	12 56.97 4.85	28 10.9 -32.2	57.39 88.07	89.7 8.2	.E.3... -5	P200R 3.5		DS *K *	5VS	1.04 .075	.00 .100	1.04 1.07	0.60 .06
I3976	12 57.07 4.85	28 7.1 -32.1	55.39 88.08	89.7 8.2	.E.6... -5	P200R 2.7							
N4871	12 57.09 4.85	28 13.6 -32.1	58.28 88.03	89.6 8.3	.LA.... -2	P200R 2.7				.72 .075	.16 .100	.68 .71	
I3973	12 57.10 4.85	28 9.2 -32.1	56.28 88.06	89.7 8.2	.LB.... -2	P200R 3.1							
N4873	12 57.14 4.85	28 15.1 -32.1	58.81 88.01	89.6 8.3	.LA.... -2	P200R 3.1				.89 .075	.14 .100	.86 .89	0.40 .03
N4872	12 57.15 4.85	28 13.0 -32.1	57.86 88.02	89.6 8.3	.LB.... -2	P200R 3.5				1.02 .316	.00 .183	1.02 1.05	0.65 .05
N4874	12 57.18 4.85	28 13.8 -32.1	58.13 88.01	89.6 8.3	.E.0... -4	W100V 3.7				1.43 .071	.00 .067	1.43 1.46	1.08 .05
I3990	12 57.20 4.84	29 10.1 -32.1	77.87 87.89	88.7 8.5						1.12 .075	.41 .100	1.02 1.02	
N4875	12 57.22 4.85	28 10.5 -32.1	56.57 88.02	89.7 8.3	.LA.... -2	P200R 2.6							
N4876	12 57.33 4.85	28 10.9 -32.1	56.48 88.00	89.7 8.3	.E.5... -5	P200R 2.6				.63 .075	.06 .100	.62 .65	
I3998	12 57.37 4.85	28 14.6 -32.1	57.99 87.97	89.6 8.3	.LB.... -2	P200R 3.3							0.22 .05
N4883	12 57.52 4.85	28 18.1 -32.1	59.09 87.91	89.6 8.4	.LB.... -2	P200R 1.9							0.30 .05
N4881	12 57.55 4.84	28 31.0 -32.1	64.11 87.81	89.4 8.4	.LA.... -3	PG48C P048N				1.02 .040	.00 .028	1.02 1.05	0.57 .02
N4892	12 57.6 4.86	27 10 -32.1	26.54 88.08	90.7 8.1	.S..... -5	P200R 1.4				1.21 .039	.64 .038	1.06 1.08	
N4886	12 57.65 4.85	28 15.3 -32.1	57.60 87.91	89.6 8.4	.E.0... -5	P200R 3.3				.92 .075	.00 .100	.92 .95	0.50 .04
A1257+33 Mk235	12 57.65 4.77	33 42.4 -32.1	107.10 83.42	84.2 9.6						.70 .075	.10 .100	.68 1.02	
N4880	12 57.67 5.03	12 45.2 -32.1	311.32 75.21	104.8 4.6	.SXR0*. S 0	P048C 2.5				1.52 .042	.12 .032	1.49 1.51	
I4011	12 57.70 4.85	28 16.3 -32.1	57.89 87.89	89.6 8.4	.E.0... -5	P200R 3.6							0.25 .03
N4889	12 57.72 4.85	28 14.7 -32.1	57.18 87.90	89.6 8.4	.E.4... -4	W100V E 4		E4 K		1.48 .061	.16 .046	1.44 1.47	1.08 .03
I4012	12 57.72 4.85	28 20.8 -32.1	59.68 87.85	89.5 8.4	.E.3... -5	P200R 3.6							0.00 .09
A1257+28 Mk 60	12 57.74 4.85	28 8.1 -32.1	54.33 87.93	89.7 8.4	.SB.1.. 1	P200R 3.1							
N4895A	12 57.75 4.85	28 26.2 -32.1	61.72 87.81	89.5 8.4	.E.5... -5	P200R 2.9							
N4877	12 57.78 5.31	-15 0.8 -32.1	306.15 47.53	131.5 -2.8	.SAS2*. 2*	W060V 2.9			03	1.43 .054	.30 .045	1.36 1.39	
I4021	12 57.83 4.85	28 18.5 -32.1	58.48 87.85	89.6 8.4	.E.0... -5	P200R 2.4				.47 .075	.00 .100	.47 .50	0.05 .05
N4894	12 57.86 4.85	28 14.1 -32.1	56.61 87.87	89.7 8.4	.LA.... -2	P200R 3.2							
N4898	12 57.88 4.85	28 13.5 -32.1	56.31 87.87	89.7 8.4	.E...P. -5	P200R 3.1							
N4895	12 57.88 4.84	28 28.1 -32.1	62.10 87.77	89.4 8.5	.LA..P/ -2	P200R 3.7				1.36 .041	.42 .042	1.26 1.29	0.83 .05
I4026	12 57.96 4.85	28 18.9 -32.1	58.33 87.82	89.6 8.5	.LB.... -2	P200R 2.4							0.32 .05
A1258-06	12 58.0 5.22	-6 12 -32.1	307.04 56.33	123.1 -4						1.19 .075	.13 .100	1.16 1.16	
N4887	12 58.01 5.31	-14 23.8 -32.1	306.28 48.15	131.0 -2.6	.L...P\$ -1	P048C 1.7				1.20 .075	.32 .100	1.12 1.15	
A1258-15 D159	12 58.08 5.32	-15 27.0 -32.1	306.22 47.09	132.0 -2.9	.I..9.. 10	P048F 2.0				1.22 .061	.00 .058	1.22 1.23	
N4900	12 58.10 5.13	2 46.1 -32.1	308.45 65.27	114.4 2.0	.SBT5.. S 5 K	W100V 3.5	RI *A I AF		2 4 S	1.37 .030	.02 .024	1.36 1.38	0.95 .04
N4896	12 58.10 4.84	28 36.8 -32.1	64.67 87.65	89.3 8.6	.L...P* -3	P048C 1.5				1.10 .042	.24 .045	1.04 1.07	0.60 .05
I4040	12 58.22 4.84	28 19.6 -32.1	58.00 87.76	89.6 8.5	.S..8*. 8*	P200R 3.2				1.03 .061	.25 .058	.97 .98	
N4906	12 58.25 4.85	28 11.5 -32.1	54.70 87.81	89.7 8.5	.E.3... -5	P200R 3.1							0.35 .05
I4041	12 58.27 4.84	28 15.9 -32.1	56.43 87.78	89.6 8.5	.E.6... -5	P200R 3.1				.84 .075	.00 .100	.84 .87	
N4891	12 58.3 5.29	-13 10 -32.1	306.49 49.37	129.8 -2.2	.SRR4*. N	P048C 2.4				1.44 .036	.05 .033	1.43 1.45	
I4042	12 58.30 4.84	28 14.3 -32.1	55.73 87.78	89.7 8.5	.LB.... -2	P200R 3.4							0.25 .05
N4899	12 58.31 5.30	-13 40.5 -32.1	306.45 48.86	130.3 -2.3	.SXT5*. S P	W100V 3.4				1.43 .042	.22 .030	1.38 1.40	
N4902	12 58.36 5.30	-14 14.7 -32.1	306.42 48.29	130.8 -2.5	.SBR3.. 3	W060V 3.3	S A B AF		3 3VS	1.48 .032	.03 .026	1.47 1.49	1.08 .04
N4914	12 58.37 4.71	37 35.1 -32.1	112.65 79.63	80.4 10.6	.LA... E 2P	P048C 2.5				1.56 .065	.22 .052	1.51 1.54	
I4045	12 58.40 4.84	28 21.5 -32.1	58.32 87.71	89.6 8.6	.E.4... -5	P200R 2.9				.84 .075	.18 .100	.80 .83	
N4907	12 58.40 4.84	28 25.5 -32.1	59.82 87.68	89.5 8.6	.SBR3.. 3	W100V 3.1				1.16 .058	.06 .052	1.15 1.17	0.75 .03
N4904	12 58.41 5.15	0 14.5 -32.1	308.15 62.75	116.9 1.4	.SBS6.. 6	W100V 3.4	BSP*AF B F			1.36 .033	.15 .028	1.32 1.34	
N4908	12 58.45 4.84	28 18.6 -32.1	57.10 87.72	89.6 8.6	.E.5... -5	P200R 3.5				1.06 .069	.04 .065	1.05 1.08	
I4051	12 58.48 4.84	28 16.5 -32.1	56.22 87.73	89.6 8.6	.E.0... -5	P200R 3.6				1.12 .051	.07 .058	1.10 1.13	0.62 .03

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _E (U-B) _T m.e. (23)	Log S _H N _H N ₂ N ₃ (24)	α ₊ (25)	Log S _H N _H N ₂ N ₃ (26)	RI HI (27)	V N _H N ₂ N ₃ m.e. (28)	V ₀ ΔV (29)	
13963				.19										6675	6682	
N4867		*		.19	*									0 1 72	4823	
N4865		14.25	12.5	.19	0.97	0.48	0.98	0.52	.88					4815	4823	
N4866	12.1	.09	14.4	13.99	.04	.06	.03	.04	.46					0 1 100	4643	
N4869	11.53	.15	14.4	11.41	.06				.70					0 1 50	1910	1860
		.14.55	13.0	.19	1.02		1.03		.91	1.54	1.23*		-1.53	0 1 30	6703	-50
		.09	14.7	14.26	.04		.04			3 2 0				0 1 100	6711	8
13976				.19										6950	6958	
N4871				.19										0 1 70	7121	8
ZCG				.19										7113	4753	
13973				.19										0 1 70	4745	8
N4873		15.15	12.6	.19	0.99	0.50	1.01	0.54	.88					0 1 70	5662	5670
ZCG		.07	14.1	14.82	.03	.06	.02	.03	.47					0 1 70	7024	7032
N4872		14.7	13.4	.19	1.00		1.01		.89					0 2 86	7176	7184
ZCG		.1	14.7	14.40	.04		.03			1.23	.88		.93	0 3 24	6217	6229
N4874		12.9	13.8	.19	1.01	0.51	1.02	0.56	.90	3 2 0				0 1 70	7897	7905
ZCG		.1	15.0	12.60	.03	.06	.01	.02	.50					0 1 72	6992	7000
13990				.19										0 1 70	9371	9380
N4875				.19										0 1 70	7961	7970
N4876				.19										0 1 70	6691	6701
13998		15.70	12.3	.19	1.01	0.35	1.02	0.39	.43					0 1 50	5898	5902
		.08			.04	.04	.03	.03						0 1 70	6214	6223
N4883		15.30	12.3	.19	1.04	0.42	1.06	0.45	.90					0 1 70	7445	7477
N4881		.07	12.9	.19	1.01	0.44	1.01	0.50	.43					0 1 50	7445	7477
N4892		14.555	14.5	14.26	.03	.03	.02	.03						0 1 70	7445	7477
N4886		.02		.19										0 1 70	7445	7477
Al257+33		14.85	12.8	.19	0.94	0.35	0.95	0.38	.84					0 1 150	7445	7477
		.06	14.4	14.57	.04	.06	.02	.03	.34					0 1 220	7445	7477
				.19										0 1 220	7445	7477
N4880	13.1			.19										7142	-57	
14011	12.57	15.95	12.7	.19	0.98	0.43	0.99	0.43	.95					0 1 72	7151	9
N4889	12.6	.05	13.3	.19	1.05	.02	1.06	0.56	.95					0 1 72	6467	6476
14012	12.13	.05	14.4	12.16	.04	.04	.02	.03						0 3 32	7376	7385
Al257+28		15.85		.19	1.03	0.47	1.04	0.50	.06					0 1 72	5167	5175
		.06		.19	.03	.03	.04	.06						0 2 38	6758	6768
N4895A				.19										0 1 67	5789	-163
N4877				.25										0 1 75	4587	4596
14021		15.90	11.6	.19	0.98	0.41	1.00	0.47	.88					0 1 72	6805*	6814
N4894		.04	13.2	15.62	.03	.04	.03	.06	.40					0 3 36	8406	8416
N4898		*		.19	*									0 1 75	8189	8198
N4895		13.8	13.4	.19	1.01		1.02		.85					0 1 72	6255	-157
14026		.13	14.4	13.32	.04	.04	.04	.04						0 1 75	2724	2564
Al258-06		15.65	12.7	.19	0.96	0.32	1.00	0.33	.03					0 1 72	4932	4941
N4887		.07		.22	.03	.03	.03	.04						0 1 100	6527	6537
Al258-15				.25										0 1 70	5868	5878
N4900	11.8	12.1	12.3	.21	0.60	-.15	0.56	-.07	.54					0 1 50	5820	5831
N4896	11.96	.1	13.7	11.87	.04	.05	0.98	.03	.85					0 1 150	7557*	7566
14040		14.65	13.1	.19	0.96		0.98	.05						0 2 51	7505	7514
N4906		.13	14.4	14.32	.05		.05							0 1 72	7114	7123
14041				.19										0 1 72	6255	-157
N4891	13.0			.24										0 1 70	2724	2564
14042	12.61	15.30	12.0	.19	1.01	0.42	1.02	0.45	.03					0 1 61	8838	8848
N4899		.07		.24	.03	.03	.03	.03						0 1 150	4932	4941
N4902	12.7	12.61	14.1	.24	0.74	0.09	0.78	0.19	.66					0 1 150	6527	6537
N4914	11.6	11.90	12.8	.24	.04	.05	.04	.04	.03					0 1 60	5868	5878
	11.58	.09	14.1	11.62	.06	.07	.06	.07						0 1 150	8838	8848
	13.0			.20	*		*							0 1 150	4932	4941
	12.30		14.4											0 1 150	4932	4941
14045		14.9		.19	1.01		*		.90					0 1 200	5868	5878
N4907		.2	13.6	14.61	.05				.74					0 1 60	5868	5878
N4904		14.2	13.4	.19	0.83	0.33	0.91	0.45	.25					0 1 60	5868	5878
N4908	12.8	.1	14.7	13.92	.03	.04	.03	.03						0 1 60	5868	5878
14051	12.75	12.7	.21	.62	.06	.07	.06	.07						0 1 150	8838	8848
		.15	14.0	.19	*		*							0 1 150	4932	4941
				.19										0 1 150	4932	4941
		14.40	13.0	.19	0.98	0.53	1.00	0.56	.89					0 1 150	4932	4941
		.05	14.8	14.14	.03	.06	.03	.04	.51					0 1 150	4932	4941

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₁₀ Log D ₀ (13)	Log A _e m.e. (14)
N4911	12 58.52	28 3.5	50.91	89.9	.SXR4..	4	W100V			1.12	.04	1.11	0.75
A1258+64	4.85	-32.1	87.71	8.5			3.6			.037	.034	1.13	.05
MK234	12 58.61	64 42.8	121.32	52.9	.S...0\$.	0\$	P048N			.83	.27	.76	
N4915	3.94	-32.1	52.66	14.7			1.0			.050	.050	.79	
	12 58.88	-4 16.6	307.69	121.3	.E...0..	-5	W060V		4	1.22	.08	1.20	*
N4919	5.20	-32.1	58.23	.3	S 0		2.7	D K *		.047	.042	1.23	
	12 58.89	28 4.6	50.76	89.9	PLAR0\$.	-2	P048C			1.14	.25	1.08	
	4.84	-32.1	87.71	8.6			1.6			.050	.050	1.11	
A1258-04	12 58.97	-4 30.4	307.70	121.5	.SBS8P.	8	P048C			1.17	.49	1.05	
D160	5.20	-32.1	54.00	.3	I \$		1.4			.061	.058	1.06	
N4922.	12 59.00	29 34.8	78.37	88.4	.I...0.P.	0	P048C			1.33	.21	1.28	
	4.82	-32.1	86.90	9.0			2.3			.039	.038	1.30	
N4921	12 59.01	28 9.2	52.38	89.8	.SBT2..	2	W100V			1.43	.05	1.42	1.22
	4.84	-32.1	87.66	8.6			3.6			.038	.035	1.44	.03
A1259+48	12 59.03	48 19.8	118.36	69.7			.93			.20	.89		
MK237	4.50	-32.1	68.98	12.6			.075			.100			
N4923	12 59.12	28 6.9	51.31	89.8	PLAR-\$.	-3	P048C			1.10	.03	1.09	0.50
	4.84	-32.1	87.65	8.7			1.7			.051	.058	1.12	.05
N4926	12 59.49	27 53.6	45.60	90.1	.LA...-	-3	P048C			1.14	.03	1.13	*
	4.84	-32.1	87.63	8.7			1.8			.049	.047	1.16	
N4927	12 59.55	28 16.4	54.15	89.7	.LA...-	-3	P048C						
	4.84	-32.1	87.51	8.8									
N4924	12 59.57	-14 42.1	306.82	131.3	PSXS0\$.	0	P048C			.86	.00	.86	
	5.31	-32.0	47.82	-2.3			1.3			.059	.052	.89	
N4926A	12 59.73	27 55.0	45.90	90.1	.L...P\$	-2	P048C			.88	.08	.86	
	4.84	-32.0	87.57	8.8			1.3			.042	.045	.89	
N4929	13 0.33	28 18.7	53.67	89.7	.E...1..	-5*	P048C			1.17	.00	1.17	
	4.83	-32.0	87.34	9.0			1.9			.075	.100	1.20	
N4928	13 0.41	-7 48.9	307.90	124.8	.SAS4P.	4	W100V		1	1.12	.11	1.09	
	5.24	-32.0	54.68	-3	S 7 K	7	2.9	S F *	4 S	.045	.037	1.11	
I0844	13 0.57	-30 15.2	305.96	146.5	.L....-/	-2	W100V			1.25	.47	1.14	
	5.51	-32.0	32.28	-6.2			2.8			.067	.063	1.18	
N4931	13 0.61	28 18.0	53.01	89.7	.L....-/	-2	P048C			1.30	.40	1.20	
	4.83	-32.0	87.28	9.0			1.8			.041	.043	1.23	
A1300-17	13 0.63	-17 9.2	306.96	133.8	.I...9P.	10	P048N			1.64	.73	1.51	
D161	5.34	-32.0	45.36	-2.7	P		2.2			.046	.045	1.22	
N4933B	13 1.28	-11 14.3	307.82	128.1	.E...P.	-5	W100V			.88	.02	.88	
	5.28	-32.0	51.25	-1.0			2.5		4	.069	.066	.92	
N4933A	13 1.32	-11 13.8	307.84	128.1	.S...0P.	0	W100V			1.40	.21	1.35	
	5.28	-32.0	51.25	-1.0	E PT -*		3.4	D *K	3	.053	.044	1.38	
N4944	13 1.43	28 27.2	54.72	89.6	.S...0\$.	0\$	P048C			1.28	.42	1.18	
	4.83	-32.0	87.06	9.2			1.7			.045	.039	1.20	
N4947A	13 1.5	-34 58	305.90	151.1	.SB.7..	7*	P048C			1.21	.24	1.15	
	5.59	-32.0	27.56	-7.1			1.5		1	.183	.120	1.17	
N4936	13 1.54	-30 15.5	306.21	146.5	.E...0...	-5	W100V			1.28	.00	1.28	0.77
	5.52	-32.0	32.26	-6.0	E 3		3.4		D3	.105	.054	1.33	.05
N4941	13 1.62	-5 17.0	308.81	122.4	RSXR2*.	2*	W060V			1.57	.24	1.51	
	5.21	-32.0	57.17	.7	S 3P		1.3	SD G	4 S	.035	.027	1.53	
N4939	13 1.63	-10 4.4	308.11	127.0	.SAS4..	4	W100V			1.76	.26	1.70	*
	5.27	-32.0	52.40	-6	N		4.1	S F	4VS	.038	.028	1.72	
N4942	13 1.71	-7 22.8	308.52	124.4	.SXT7*.	7	P048C			1.25	.13	1.22	
	5.24	-32.0	55.08	.2			1.9			.049	.039	1.24	
A1301-03	13 1.94	-3 18.2	309.31	120.5	.SBS7..	7	P048C			1.55	.10	1.53	
	5.19	-32.0	59.14	1.3			2.6			.036	.033	1.55	
N4948	13 2.32	-7 40.6	308.74	124.8	.SBS7\$.	7	P048C			1.25	.40	1.16	
	5.24	-31.9	54.78	.2			1.7			.048	.037	1.18	
N4948A	13 2.48	-7 53.6	308.77	125.0	.SBS7..	7	P048C			1.16	.09	1.14	
D162	5.24	-31.9	54.56	.2	SX	8	1.8			.053	.044	1.16	
N4945	13 2.53	-49 12.0	305.28	165.2	.SBS6*.	6*	S030V			2.30	.66	2.14	
	5.88	-31.9	13.34	-10.2			3.7			.040	.024	2.19	
N4951	13 2.53	-6 13.7	309.06	123.4	.SXT6*.	6	W060V		1	1.52	.38	1.43	
	5.22	-31.9	56.21	.7	S NK *		3.0	S G *	3 S	.042	.031	1.45	
N4952	13 2.56	29 23.7	67.59	88.7	.E...2...	-5	P048C			1.20	.20	1.15	
	4.81	-31.9	86.41	9.7			1.8			.050	.050	1.18	
N4947	13 2.6	-35 4	306.14	151.3	.SBR2..	2	S030V		5	1.45	.23	1.40	
	5.60	-31.9	27.45	-6.9			1.9		3 S	.141	.088	1.44	
A1302-07	13 2.63	-7 37.1	308.88	124.7	.SB.9...	9	P048F			1.18	.34	1.10	
D163	5.24	-31.9	54.83	.3	SB	9	1.6			.061	.058	1.11	
N4957	13 2.81	27 50.2	41.93	90.3	.E...3...	-5	W100V		E3 K	1.13	.09	1.11	
	4.83	-31.9	86.91	9.4			3.0		D3	.048	.042	1.14	
A1302+32	13 2.9	32 16	92.08	80.9	.S...3P.	3	P048N			1.24	.37	1.15	
	4.76	-31.9	84.28	10.4			1.7			.039	.038	1.17	
A1302+30	13 2.93	30 32.6	79.73	87.6									
MK 62	4.79	-31.9	85.62	10.0									
N4958	13 3.20	-7 43.1	309.10	124.9	.LBR.\$./	-2	W060V	D K	3	1.61	.47	1.50	*
	5.24	-31.9	54.68	.4	E 6		3.1	D K	4	.039	.028	1.53	
N4961	13 3.40	28 0.1	44.53	90.2	.SBS6...	6	W100V	SI *F		1.24	.14	1.21	
	4.82	-31.9	86.76	9.6	S 5	5*	3.1		3 S	.034	.029	1.22	
I4182	13 3.51	37 52.5	107.71	80.3	.SAS9..	9	P048C			1.76	.03	1.75	
	4.67	-31.9	79.09	11.6			3.1			.039	.038	1.76	
A1303-17	13 3.63	-17 14.9	307.97	134.1	.I...9...	10	P048F			1.22	.00	1.22	
D164	5.35	-31.9	45.21	-2.1		9	2.0			.061	.058	1.23	
N4945A	13 3.7	-49 24	305.46	165.4	.S...\$./		S030V						
	5.90	-31.9	13.13	-10.1									
I4189	13 3.7	36 14	104.49	82.0	.S...6*.	6*	P048N			1.21	.10	1.19	
	4.70	-31.9	80.63	11.3			1.9			.039	.038	1.21	
N4966	13 3.9	29 20	64.42	88.9	.S.....		P048N			1.08	.28	1.02	
	4.80	-31.9	86.19	10.0			1.5			.039	.038	1.04	
A1303+53	13 3.93	53 45.6	118.06	64.3									
MK242	4.30	-31.9	63.50	14.2									
A1303+33	13 3.97	33 14.3	94.98	85.0									
MK241	4.74	-31.9	83.33	10.8									
A1304+28	13 4.3	28 8	46.12	90.1						1.19	.18	1.15	
	4.82	-31.9	86.54	9.8						.075	.100		
N4965	13 4.43	-27 57.7	307.14	144.5	.SAT8..	8	P048C			1.42	.06	1.40	
	5.50	-31.8	34.51	-4.8			2.4			.042	.037	1.42	
N4971	13 4.5	28 48	56.18	89.4						1.12	.00	1.12	
	4.81	-31.9	86.31	10.0						.075	.100		
A1304+67	13 4.62	67 58.2	120.76	49.6	.I...9...	10	P048N			1.51	.22	1.46	
D165	3.61	-31.9	49.36	15.6	I	8	2.4			.052	.050	1.47	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _c (15)	B _T m.e. (16)	m' ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _e (U-B) _e (23)	Log S _R N ₊ N _H N ₊ (24)	α ₊ α ₊ (25)	Log S _H N ₊ A ₂₁ (26)	RI HI (27)	V N _H N ₂ m.e. (28)	V ₀ ΔV (29)		
N4911		13.6 .1	12.8 13.9	.19 13.33 .26	0.85 .1	0.19 .05	0.90 .1	0.28 .04	.75 .11						8006 0 1 61 2132 0 1 220 3152 0 1 40 7110 0 1 70	8014 8 2287 155 3028 -124 7119 9	
A1258+64																	
N4915	12.9 12.88	12.80 .09	13.7	.22 12.53 .19	0.89 .04		*		.81								
N4919																	
A1258-04				.22													-125
N4922.				.19											7357 0 1 67 5459 0 1 59 9235 0 1 220 5458 0 1 70 7751*	7372 15 5468 9 9329 94 96 9 7759 8	P
N4921		13.00 .07	14.6 14.9	.19 12.72 .22	0.89 .04	0.35 .04	0.94 .02	0.42 .02	.80 .29	1 0 0							S
A1259+48																	
N4923		14.55 .09	12.5 14.8	.19 14.27 .19	0.97 .04	0.38 .04	0.99 .03	0.42 .03	.87 .36 .97								
N4926		14.00 .09	14.5	13.69	1.09 .03		*								7751*	7759 8	
N4927				.19											7583 0 1 70	7593 10	
N4924				.25													
N4926A				.19											7175 0 1 67	-161 7184 9	
N4929				.19											6338 0 1 150	6349 11	
N4928	12.9 13.36		13.5	.23													-136
I0844				.33													
N4931		14.5 .15	14.9	.19 14.06 .26	1.04 .06				.91						5849 0 1 70 747 1 0 10	-205 5860 11 579 -168	
A1300-17				.24								1.70 1.10					P
N4933B				.24													P
N4933A	12.8 12.73		14.1	.24													
N4944				.19											6993 0 1 67	7005 12	S
N4947A				.38													
N4936	12.6* 12.16 12.4	12.40 .09 11.9	11.7 13.8	.33 12.02 .22	1.08 .04 .85 .06	0.55 .04	1.09 .03	0.60 .03	.97 .48 .75						3269 0 1 24 720* 1 1 24 3096* 0 2 17	-215 3065 -204 594 -126 2952 -144	T PT S
N4941	12.12 12.2 11.56	.15 * 14.6	14.0	11.48 .23	*	*	*	*				1.01	3.49				
N4939				.23													
N4942				.22													
A1301-03				.23											1280 0 1 65	-134 1161 -119	
N4948				.23													
N4948A				.23								.61 1.01			1554 1 0 10 594 0 1 40	-134 1419 -135 356 -238	P
N4945	9.2* 9.72	9.475 .13	14.2	.69 8.25						2.82 5 510	.49 .68		1.29				
N4951	12.7 12.56		14.1	.22 .19								1.21 1.02			1177 1 0 10 5865 0 1 71	1048 -129 5882 17	
N4952			14.0	.38													
N4947	12.6 12.50			.23								.86 1.02			1124 1 0 15 7006 0 1 70	-214 990 -134 7016 10	
A1302-07			14.0 .15	.19 13.70	1.06 .06				.95								
N4957			14.4	.19													
A1302+32				.19													P
A1302+30				.19													
N4958	11.6 11.55	11.40 .09	13.1	.23 10.96 .04	0.87 .04		*		.76						9883 0 2 39 1515 0 1 75 2531 1 1 10 225 0 1 185	9905 22 1381 -134 2542 11 279 54	
N4961	13.2 13.24	13.9 .15	14.6	13.59 .20	.45 .06				.36	1 0 0		.82 1.01	.93				S
I4182																	
A1303-17				.26 .70								.88 1.01			1464 1 0 10	1298 -166	
N4945A				.20													
I4189				.19													
N4966				.23											7102 0 1 70 7445 0 1 220	7119 17 7563 118	
A1303+53				.19													
A1303+33				.19											7743 0 1 220 6082 0 1 185	7777 34 6095 13	S
A1304+28				.31													
N4965				.19											6399 0 1 70 35 1 0 10	-197 6415 16 202 167	
N4971				.28								1.09 1.01					
A1304+67 7Z499																	

NGC IC, A Mr, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D) Log Do (13)	Log A _e m.e. (14)
10850	13 5.2	-0 35	311.59	118.1	.S...*		P048N			.89	.58	.76	
	5.16	-31.8	61.75	2.8			.8			.039	.038	.78	
N4975	13 5.4	-4 45	310.65	122.2						.70	.10	.68	
	5.21	-31.8	57.61	1.8						.075	.100		
N4976	13 5.70	-49 14.5	305.81	165.3	.E.4.P*	-5*	C060C			1.63	.22	1.58	1.15
	5.92	-31.8	13.27	-9.7			3.4		3	.049	.040	1.69	.06
N4981	13 6.22	-6 30.8	310.64	123.9	.SXR...	4	W060V		3	1.44	.10	1.42	
	5.23	-31.8	55.83	1.5	S 5	4	3.1	S FG	4 S	.040	.030	1.44	
N4984	13 6.30	-15 15.0	309.15	132.3	RLXT...	-1	W100V	D GK		1.44	.10	1.42	
	5.34	-31.8	47.14	-9	S N *		3.6	D K	5	.053	.036	1.45	
N4980	13 6.43	-28 22.5	307.64	145.0	.SXT0S.	0	P048C			1.34	.27	1.28	
	5.51	-31.8	34.07	-4.4			2.0			.055	.047	1.32	
10853	13 6.5	53 2	116.97	65.0	PSXS2..	2	P048N			1.11	.02	1.10	
	4.29	-31.8	64.16	14.5			1.8			.039	.038	1.12	
A1306+62	13 6.8	62 33	119.46	55.2	.S...0..	0	P048N			1.14	.38	1.05	
	3.91	-31.8	54.73	15.5			1.5			.039	.038	1.08	
N4999	13 7.00	1 56.4	313.38	115.8	.SBR3..	3	W060V	B FG		1.41	.07	1.39	
	5.13	-31.7	64.19	4.0	N *		3.1		4 S	.034	.028	1.41	
N4995	13 7.07	-7 34.0	310.78	125.0	.SXT3..	3	W100V	S F	3*	.139	.15	1.36	
	5.24	-31.7	54.76	1.4	S 3 N		3.4	S FG	4	.031	.026	1.38	
N5000	13 7.4	29 10	57.65	89.2	.SBT4..	4	P048N			1.28	.06	1.26	
	4.79	-31.7	85.58	10.7			2.1			.039	.038	1.28	
A1307-15	13 7.42	-15 30.2	309.59	132.6	PS...2S.	2S	P048C			1.45	.41	1.35	
	5.36	-31.7	46.79	-7			3.5			.129	.067	1.43	
A1307+34	13 7.7	34 27	94.55	83.9	.SBS6..	6	P048N			1.51	.62	1.36	
	4.70	-31.7	81.89	11.8			2.0			.039	.038	1.37	
14209	13 7.77	-6 54.3	311.23	124.4	.SBR5S.	5	P048C			1.20	.39	1.11	
	5.24	-31.7	55.40	1.7			1.6			.058	.058	1.13	
A1307-07	13 7.9	-7 23	311.18	124.9						.93	.30	.86	
	5.24	-31.7	54.92	1.6						.075	.100		
N5005	13 8.62	37 19.4	101.63	81.1	.SXT4..	4	W100V	S G	3*	1.73	.30	1.66	1.15
	4.64	-31.7	79.25	12.5	S 2	3	4.0	S GK	5	.024	.017	1.68	.03
N5004A	13 8.7	29 50	63.54	88.6	.SB.2..	2	P048N			1.20	.26	1.14	
	4.77	-31.7	85.04	11.1			1.7			.039	.038	1.16	
N5004	13 8.7	29 54	64.22	88.5	.L.....	-2	P048N			1.28	.09	1.26	
	4.77	-31.7	85.01	11.1			2.0			.050	.050	1.29	
A1308+60	13 9.20	60 51.3	118.66	57.0									
MK243	13 9.36	-31.7	56.38	15.6									
A1308+03	13 8.84	3 40.6	315.16	114.3	.SB.5P*	5	P048C			1.17	.81	.98	
	5.11	-31.7	65.81	4.9			1.1			.039	.038	1.00	
A1309+84	13 9.0	84 53	122.48	32.0	.P.....		P048N			1.24	.05	1.23	
	-1.74	-31.8	32.50	15.9			2.0			.050	.050	1.26	
N5012	13 9.20	23 11.0	351.39	95.2	.SXT5..	5	W100V	S F		1.46	.21	1.41	
	4.86	-31.6	83.79	9.8			3.5		4 S	.023	.028	1.43	
N5014	13 9.21	36 33.0	99.21	81.9	.S...1S/	1S	P048C			1.23	.40	1.14	
MK449	13 9.4	-31.7	79.90	12.5			1.6			.037	.037	1.16	
N5011A	13 9.4	-43 3	306.96	159.4	.SX.6*	6	P048C			1.29	.23	1.24	
	5.80	-31.6	19.39	-7.6			1.6			.141	.091	1.28	
A1309+21	13 9.55	21 4.0	340.59	97.3	.L.....	-2	P048N			1.10	.38	1.01	
	4.89	-31.6	82.12	9.4			1.4			.050	.050	1.04	
N5016	13 9.70	24 21.7	1.03	94.1	.SXT5..	5	W100V	S F		1.27	.11	1.24	
	4.85	-31.6	84.44	10.1	S 3	4	3.2		3 S	.035	.030	1.26	
N5015	13 9.8	-4 3	312.87	121.8						1.27	.09	1.25	
	5.21	-31.6	58.15	3.0						.075	.100		
A1309-17	13 9.9	-17 15	310.08	134.5						1.50	.45	1.40	
	5.37	-31.6	45.06	-6						.075	.100		
A1309+26	13 9.9	26 57	28.68	91.5						.93	.26	1.18	
	4.81	-31.6	85.33	10.7						.075	.100	.89	
N5023	13 9.97	44 18.3	110.39	74.0	.S...S*/	5*	P048C			1.81	.82	1.62	
	4.49	-31.6	72.58	13.9			2.4			.035	.031	1.64	
N5011	13 10.0	-42 50	307.09	159.2	.E.1...*	-5	C060C			1.30	.00	1.30	
	5.80	-31.6	19.60	-7.5			3.0		4	.224	.105	1.38	
A1310-32	13 10.15	-32 25.6	308.16	149.1	.SBS8S/	8	P048C			1.49	.55	1.27	
	5.60	-31.6	29.96	-4.8			2.0			.057	.046	1.39	
A1310+50	13 10.21	50 39.5	114.59	67.6									
MK244	13 10.21	-31.6	66.39	14.8									
N5017	13 10.26	-16 30.2	310.33	133.8	.E.2.*	-5*	P048C			1.22	.06	1.21	
	5.36	-31.6	45.80	-3	E 2		2.0			.071	.075	1.25	
N5018	13 10.33	-19 15.2	309.90	136.4	.E.3.*	-5*	W060V			1.42	.10	1.40	
	5.40	-31.6	43.06	-1.1	S 0		3.1	D K	4	.059	.043	1.44	
A1310+67	13 10.33	67 46.0	119.90	49.9									
MK245	13 10.33	-31.6	49.50	16.1									
N5022	13 10.82	-19 16.9	310.06	136.5	.S...3/.	3	P048C			1.40	.75	1.22	
	5.40	-31.6	43.02	-1.0			1.6		1	.038	.036	1.25	
A1310+36	13 10.97	36 28.9	97.26	82.0	.IXS9..	10	P048C			1.39	.05	1.38	
O166	13 11.02	-31.6	79.60	12.8	I	8	2.3			.046	.037	1.39	
N5028	13 11.12	-12 46.7	311.32	130.3	.E.6...*	-5	R060V			1.24	.26	1.18	
	5.32	-31.6	49.47	.9			2.6			.183	.085	1.22	
N5033	13 11.14	36 51.8	98.09	81.6	.SAS5..	5	W100V	S G	2	2.02	.27	1.96	1.55
	4.63	-31.6	79.44	12.9	S 4 T	2*	4.6	S G	04 S	.027	.019	1.98	.04
A1311+46	13 11.17	46 35.0	111.64	71.8	.I..9..	10	P048N			1.12	.21	1.07	
O167	13 11.17	-31.6	70.33	14.4	I	9	1.6			.039	.038	1.08	
N5030	13 11.24	-16 13.7	310.71	133.6	.LBR+S.	-1S	P048C			1.27	.20	1.22	
	5.36	-31.5	46.04	-0			1.9			.075	.091	1.25	
N5026	13 11.3	-42 42	307.36	159.1	.SBS1..	1	S030V			1.36	.12	1.33	
	5.81	-31.5	19.71	-7.2			2.4		3 S	.224	.129	1.39	
A1311+35	13 11.6	35 35	93.96	82.9									
	4.66	-31.5	80.51	12.8									
A1311+42	13 11.66	42 28.5	107.46	76.0	.SBS5S/	5	P048C			1.29	.52	1.17	
	4.52	-31.5	74.24	13.9			1.6			.038	.036	1.19	
N5035	13 12.15	-16 13.8	311.02	133.7	.LXR...*	-1	W060V			1.20	.13	1.17	
	5.36	-31.5	46.01	.2			2.6		4	.071	.077	1.20	
A1312+46	13 12.25	46 11.0	110.78	72.2	.IB.9..	10	P048N			1.53	.38	1.44	
O168	13 12.33	-31.5	70.66	14.5	I	8	2.3			.046	.045	1.45	
N5037	13 12.33	-16 19.6	311.06	133.8	.SAS1..	1*	W060V			1.40	.46	1.29	
	5.37	-31.5	45.91	-2	S 4	5	2.7		3	.050	.040	1.32	
A1312+35	13 12.49	35 8.6	91.54	83.4	.I...P*	10*	P048N			1.05	.09	1.03	
MK450	13 12.49	-31.5	80.78	12.9			1.6			.039	.038	1.04	
A1312+55	13 12.55	55 3.8	115.82	63.1									
MK247	13 12.55	-31.5	62.01	15.6									

NGC, IC, A Zw, VV (14)	Magnitudes				Color indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _e (U-B) _e (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	V ₀ ΔV (29)	
10850				.21											-106	S
N4975				.22											-121	S
N4976	11.6 11.13 12.24	11.17 .12	12.4 13.8	.69 10.46 .22	0.97 .05	0.33 .06	0.98 .03	0.36 .04	.80 .19					1369 0 2 26	1133 -236	P
N4981	11.83		13.6	.22											-127	S
N4984	11.9 11.84		13.7	.25											-158	P
N4980				.32											-196	
10853				.23										7149 1 0 20	7265 116	
A1306+62				.26											150	
N4999	12.8 12.58		14.3	.21											-94	
N4995	11.7 11.96	11.90 .13	13.3	.23 11.54	0.87 .05		*		.78					1708 0 1 58	1577 -131	
N5000				.19										5667 0 2 72	5686 19	
A1307-15				.25											-158	
A1307+34				.19											42	
14209				.22											-128	
A1307-07				.23											-129	S
N5005	11.3 11.08	10.645 .08	11.9 13.4	.20 10.19 .19	0.82 .02	0.30 .04	0.87 .03	0.39 .03	.71 .21	1.23 5 3 2	.96* .96*	1.79 1 .02	3.33 1.88	1015 1 3 26 7188	1069 94 7211	PT
N5004A				.19										0 1 70 6982	23 7005	
N5004				.25										0 1 70 8339	23 8484	
A1308+60				.21										0 1 220 2990	145 2904	S
A1308+03				.41										0 1 28 4636	-86 4849	
A1309+84 72501				.20										0 1 231	213	
N5012	12.6 12.47		14.1	.20										1105 0 2 71	-4 1156 51	
N5014				.51											-226	
N5011A				.20						1.73 1 3 3	.78* .78			9045 0 1 70	9032 -13	
A1309+21				.20											0	
N5016	12.8 12.94		13.9	.20											-116	
N5015				.22											-162	
A1309-17				.26										886 0 1 70	897 11	
A1309+26				.21											84	
N5023				.50											-225	
N5011	12.9 12.62		14.1	.35											-204	
A1310-32				.22										8638 0 1 220	8747 109	
A1310+50				.26											-159	
N5017	13.3 13.12		14.1	.27	1.04 .06				.95					2897 0 1 75	2729 -168	
N5018	11.6 11.56	11.8 .15	13.6	11.49										5958 0 1 220	6126 168	
A1310+67				.28											-167	
N5022				.27										957 1 0 10	1009 52	
A1310+36		13.60 .11	15.3	.19 13.36 .24	.38 .07				.32			.85 1 .01	1.08		-146	
N5028				.20										907 1 4 11	961 54	PST
N5033	11.6 10.58	10.60 .09	13.8 14.9	10.18	0.54 .04	*	0.70 .03	0.22 .05	.44	1.54* 1 1 1	.73% .85%	2.18 1 .01	2.56% .94		-157	
A1311+46				.21								.32 1 .01		163 1 0 70	256 93	
N5030				.25											-224	
N5026				.50											5092	T
A1311+35 12 53		*		.19	*	*								5043 0 1 105	49	
A1311+42				.20											77	
N5035				.25											-157	
A1312+46				.21								1.53 2 .02		198 2 0 9	290 92	
N5037	13.1 13.15		13.8	.25										840 0 1 100	-157 888 48	
A1312+35				.19										9673 0 2 43	9799 126	
A1312+55		*		.23	*	*										

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₁₀ Log Do (12)	Log Ae m.e. (13)
N5044	13 12.73 5.36	-16 7.3 -31.5	311.24 46.10	133.6 .3	.E.0... E 0	-5	W060V 3.2	E1 K		1.42 .045	.01 .035	1.42 1.46	1.05 .04
N5042	13 12.79 5.47	-23 43.1 -31.5	309.98 38.56	140.9 -1.8	.SX55.. E 0	5	P048C 2.6			1.62 .037	.23 .034	1.56 1.58	
N5046	13 13.09 5.36	-16 3.7 -31.5	311.38 46.15	133.6 .4	.E.2.5.. E 0	-55	W060V 2.5			1.08 .073	.07 .085	1.06 1.10	
N5047	13 13.14 5.37	-16 15.3 -31.5	311.36 45.95	133.7 .4	.L..../ E 0	-2	W100V 3.2			1.48 .059	.60 .042	1.34 1.37	
N5049	13 13.32 5.37	-16 8.0 -31.4	311.44 46.07	133.6 .5	.L..../ E 0	-2	W100V 3.0		3 S	1.33 .039	.49 .035	1.21 1.24	*
A1313+47	13 13.32 4.00	47 45.7 -31.5	111.50 59.08	70.6 14.9	.IA.9.. I 1	10	P048N 2.0			1.41 .039	.40 .038	1.32 1.33	
A1313+25	13 13.50 4.81	25 42.3 -31.5	17.16 84.26	92.9 11.3	.I..9.. I 1	10	P048F 1.4			1.14 .046	.48 .045	1.03 1.04	
D170	13 13.59 4.50	42 17.8 -31.5	106.00 74.28	76.2 14.2	.SAT4.. S 4	4	W100V 4.8	S G	5	2.09 .029	.21 .021	2.04 2.06	1.55 .05
N5055	13 13.76 5.06	7 18.6 -31.4	320.43 69.07	111.1 7.0	.E.2*P.. E 0	-4*	PG48C 1.5		4VS	.87 .075	.14 .100	.84 .87	
A1313+07	13 13.76 5.06	7 18.6 -31.4	320.43 69.07	111.1 7.0	.E.2*P.. E 0	-4*	PG48C 1.5		4VS	.87 .075	.14 .100	.84 .87	
N5054	13 13.30 5.37	-16 22.3 -31.4	311.73 45.80	133.9 .6	.SAS4.. S 3 NT	4	W100V 4.0	S F	4 S	1.70 .031	.21 .025	1.65 1.67	
I0875	13 15.14 4.00	57 48.0 -31.4	116.19 59.25	60.2 16.2	.L..../ E 0	-2	P048N 2.0			1.28 .071	.12 .071	1.25 1.28	
MK249	13 15.34 5.53	-26 34.4 -31.3	310.26 35.66	143.8 -2.1	.E.0... E 2	-5	W100V 3.6	E1 K		1.41 .088	.04 .044	1.40 1.45	
N5061	13 15.42 5.53	44 40.2 -31.3	107.71 71.94	73.8 14.9									
A1315+44	13 15.61 5.61	-31 22 -31.3	309.62 30.89	148.4 -3.3	.SBT3*P S 3	3*	P048C 1.8			1.13 .061	.04 .058	1.12 1.15	
MK250	13 16.0 5.98	-47 39 -31.3	307.70 14.70	164.2 -7.7	.SA.3*. S 3	3*	S030V 2.3		3	1.44 .158	.36 .100	1.36 1.42	
N5064	13 16.07 5.26	-8 11.0 -31.3	314.40 53.82	126.2 1.7	.I..9.. I 1	10	P048F 1.7			1.15 .061	.14 .058	1.11 1.12	
A1316-08	13 16.08 4.70	31 44.0 -31.3	70.99 82.69	87.0 13.0	.SA.3P* P 0	3	P048C 1.6			1.02 .056	.04 .048	1.01 1.03	
D171	13 16.21 5.44	-20 46.6 -31.3	311.49 41.38	138.3 -2	.SAT6.. SAS	6	P200V 5.0	BI *A SX AF	1	1.84 .029	.04 .021	1.83 1.85	
N5068	13 16.4 5.44	-43 24 -31.3	308.26 18.92	160.1 -6.5	.S..3S.. S 3	3S	S030C 1.4		2VS	1.27 .316	.37 .141	1.18 1.25	
N5090A	13 16.42 4.48	42 12.7 -31.3	104.04 74.16	76.4 14.8	.SBS7.. SB	7	P048N 2.1		3 S	1.39 .039	.21 .038	1.34 1.35	
A1316+42	13 16.7 5.35	-14 36 -31.3	312.95 47.47	132.4 1.7	.SBS5S/ E 0	5	P048C 2.0			1.54 .039	.69 .038	1.38 1.40	
D172	13 16.88 5.32	-12 23.7 -31.3	313.55 49.63	130.3 2.4	.E.3... E 3	-5	W100V 3.3	ED K		1.30 .056	.09 .038	1.27 1.31	0.70 .04
N5073	13 16.99 5.32	-12 26.2 -31.3	313.58 49.59	130.3 2.4	.SBT4*P S 4	4	P048C 1.8		04	1.22 .035	.23 .030	1.16 1.18	
N5077	13 17.09 5.55	-27 8.7 -31.3	310.64 35.04	144.4 -1.8	.SAS1* S 5	1	W100V 3.6		2	1.51 .041	.27 .035	1.45 1.49	
N5078	13 17.3 5.88	-43 36 -31.2	308.41 18.70	160.3 -6.4	.SBT5*. S 5	5	P048C 1.6		04	1.30 .141	.29 .091	1.23 1.28	
N5090B	13 17.57 5.50	-24 10.7 -31.2	311.28 37.96	141.6 -9	.SAS5.. S 3	5	W100V 3.8	S F	3VS	1.53 .033	.05 .025	1.52 1.54	
N5085	13 17.57 5.46	-21 34.0 -31.2	311.76 40.55	139.1 -1	.L..../ E 8*	-2	W100V 3.6			1.68 .053	.55 .035	1.55 1.59	
N5084	13 17.69 5.32	-12 18.5 -31.2	313.88 49.69	130.3 2.6	.SAS3* S 5 K	3*	W100V 3.2	D K	4 S	1.43 .043	.46 .032	1.32 1.34	
N5088	13 17.71 5.44	-20 20.9 -31.2	312.04 41.75	138.0 .3	.LA.4.. E 4	-3	W100V 3.4		4	1.37 .037	.18 .030	1.33 1.37	
N5087	13 17.93 4.66	33 24.3 -31.2	78.70 81.35	85.4 13.7				ES K	4VS	.93 .075	.00 .100	.93	
N5098A	13 17.98 4.66	33 24.4 -31.2	78.66 81.34	85.4 13.7						.93 .075	.00 .100	.93	
N5098B	13 17.98 4.66	33 24.4 -31.2	78.66 81.34	85.4 13.7						.93 .075	.00 .100	.93	
A1317+52	13 17.94 4.18	52 18.8 -31.3	112.70 64.51	66.0 16.1									
MK251	13 18.0 5.89	-43 26 -31.2	308.56 18.85	160.2 -6.2	.S..1.. S 1	1	P048C 1.8		3 S	1.49 .316	.47 .141	1.38 1.45	
N5082	13 18.15 5.02	10 3.0 -31.2	325.99 71.34	108.7 8.7	.SX.9.. SX	9	P048N 2.1			1.35 .052	.22 .050	1.30 1.31	
A1318+10	13 18.2 5.89	-43 28 -31.2	308.60 18.82	160.2 -6.2	.E.2... E 2	-5	S030V 2.1			1.41 .120	.02 .059	1.41 1.49	
D173	13 18.28 4.64	34 23.9 -31.2	82.93 80.60	84.4 13.9	.I..9*P I 9*	10*	P200C 3.5			1.24 .050	.14 .050	1.21 1.22	
N5091	13 18.3 5.89	-43 28 -31.2	308.62 18.81	160.2 -6.2	.S.3\$P/ S 3	3*	S030C 1.3		2	1.34 .158	.69 .095	1.18 1.24	
A1318+56	13 18.45 4.00	56 41.9 -31.2	114.86 60.23	61.4 16.5									
MK253	13 18.9 5.44	57 55 -31.2	115.29 59.03	60.2 16.7	.S..... S 1		P048N 1.6			1.29 .039	.51 .038	1.17 1.19	
N5109	13 19.01 5.56	-27 10.1 -31.2	311.16 34.96	144.6 -1.4	.RSBT0.. SB0	0	P200V 4.8		04	1.74 .031	.05 .026	1.73 1.77	
N5101	13 19.1 5.33	-12 57 -31.2	314.22 48.99	131.0 2.7						1.42 .075	.10 .100	1.40	
N5105	13 19.12 5.73	-36 22.1 -31.2	309.74 25.84	153.4 -4.1	.LA.-.. S 1	-3	C060C 3.9			1.97 .059	.43 .051	1.87 1.93	1.15 .05
N5102	13 19.15 4.54	38 48.0 -31.2	96.02 76.98	79.9 14.8	.SBS6S/ S 6	6	PG48C 2.0	SI *AF	4	1.28 .038	.45 .037	1.18 1.20	
N5107	13 19.68 4.53	38 59.8 -31.2	96.08 76.76	79.7 14.9	.SBT6.. S 5 K	6	W060V 3.4	S P*A SXI A		1.59 .040	.13 .032	1.56 1.58	
N5112	13 20.56 4.75	27 14.5 -31.1	33.53 82.99	91.7 13.1	.SBS5*. S 2	5*	W060V 2.6	S *AF*	3VS	1.34 .034	.41 .029	1.24 1.26	
A1320+51	13 20.77 4.16	51 59.9 -31.1	111.53 64.69	66.3 16.5									
MK254	13 20.95 4.11	53 13.7 -31.1	112.26 63.50	65.1 16.7						.79 .075	.00 .100	.79	
A1320+53	13 21.30 5.52	-24 24.2 -31.0	312.30 37.61	142.1 -1	.I..9.. I 9*	10	P048N 2.0			1.26 .071	.05 .071	1.25 1.26	
MK255	13 21.44 4.67	31 45.6 -31.1	67.09 81.68	87.1 14.1	.E.2*P.. E 2	-5	PG48C 2.3			1.42 .069	.11 .063	1.40 1.43	
N5127	13 21.48 2.93	70 46.5 -31.1	119.14 46.38	46.7 17.1	.SA.55P S 5	5*	P048C 1.7			1.14 .037	.14 .035	1.11 1.13	

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m' m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ΔV (29)		
N5044	12.2	12.05	12.8	.25	1.02	0.55	1.03	0.58								-156	
N5042	11.88	.06	14.1	.29	.03	.03	.02	.03								-179	
N5046				.25												-155	
N5047				.25												-156	
N5049		13.6		.25	0.69		*		.56						2744	2588	
		.2	13.9	13.11	.04										0 1 65	-156	
A1313+47				.21								.85			259	358	
A1313+25				.20								1 .02			1 0 10	99	
N5055	10.5	9.30	12.5	.20	0.73	*	0.75	0.15	.64	1.67	.85*	1 .02	3.49		1 0 10	937	
A1313+07	9.64	.09	14.1	8.93	.05	.03	.03	.04		3 4 2	1.33*	.63			1 0 10	8	PST
		14.5	.2	.20	1.06	0.33	*	*		2.28	.64				1 4 9	509	
N5054	11.9		13.5	.26	.05	.06				6 5 3	.71					-68	
	11.46		14.3							1.005	.615					-156	
I0875				.24												2696	2833
N5061	11.7			.31	.40	-.51									0 1 105	137	
A1315+44	11.61		13.5	.21											1961	1775	
I4219				.35											0 1 61	-186	
N5064	13.1			.64											8339	8427	
	12.98		14.1												0 1 220	88	
A1316-08				.23								.45			3647	3449	
N5074	13.2	14.4	14.2	.19	.40	-.51						1 .01			0 1 20	-198	
N5068	13.70	.15		.28	.06	.07				1.34*						-229	
N5090A	10.53		14.5	.52						0 1 4	.08*				570	402	P
A1316+42				.20								.65			1216	1295	
												1 .01			1 0 20	79	
N5073				.25												-148	
N5077	12.2	12.60	11.6	.24	1.06	0.59	1.06	0.60	.98	1.40			.79		2823	2683	
N5079	12.26	.05	13.9	12.32	.02	.02	.02	.02	.54	0 3 9	.09				0 3 27	-140	
N5078				.31												-140	
N5090B				.53												-186	
																-222	
N5085	12.3			.29												-177	
N5084	11.94		14.3	.28												-170	
N5088	12.4		13.9	.24												-139	
N5087	13.2		14.0	.27												1832	1666
N5087	13.17			.19	1.03	.06			.94						0 1 150	-166	
N5098A	12.4	12.0	13.3	11.67	.06					1.00*	.705				11370	11414	
	12.31	.15								1 1 1	1.075				0 1 150	44	
N5098B				.19							*						
A1317+52				.22											4581	4700	
N5082				.52											0 2 91	119	
A1318+10				.20								.90			1134	-221	
N5090	12.9		14.4	.52								1 .01			1 0 15	-53	
	12.37															-221	
I0883		*		.19	*	*				1.15*	.375				6894	6942	P
12 56				.52						1 1 1	.815				0 2 25	48	
N5091										2.76*	.82*					-221	
A1318+56				.24						0 1 4					6552	6687	
N5109				.24											0 1 220	135	
N5101	12.5		15.0	.31												139	PT
	11.58															-185	
N5105				.25												-141	
N5102	10.8	10.35	11.6	.40	0.70	0.27	0.66	0.25	.58			1.66			454	247	P
N5107	10.06	.12	14.0	9.86	.05	.06	.03	.03	.19			1 .02	2.53		1 2 10	-207	
				.20						.95*	.905					67	
N5112	12.6*	*		.20	*	*				1 1 0		1.33			962	1030	
N5116	11.82		14.3	.20								1 .01			1 0 10	68	
	12.9															20	
	13.15		13.7														
A1320+51				.22											8936	9055	
A1320+53				.23											0 1 220	119	
A1321-24				.30								.69			9092	9215	
N5127				.19								1 .01			0 2 91	123	
															2057	1882	
N5144				.29						2.24	.605				1 0 20	-175	
72511										6 5 2	.67				4830	4869	
															0 1 120	39	
															3007	3187	
															0 1 220	180	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log(D ₀) Log D ₀ (13)	Log A _e m.e. (14)
I4237	13 21.83	-20 52.6	313.20	138.8	.SBR35.	3	W100V		3 5	1.29	.13	1.26	
N5121	13 21.9	-37 25	310.19	154.6	PSA51..	1	C060C		3	1.36	.06	1.35	
A1322+36	13 22.06	36 51.1	88.61	82.0						1.83	.091	1.40	
MK451	13 22.4	-31.0	78.25	15.1									
N5121A	13 22.4	-37 6	310.35	154.3	.S..0*.	0*	P048C			1.32	.51	1.20	
N5128	13 22.53	-42 45.5	309.52	159.8	.L...P.	-2	1.4.....V 5.0	E P*		2.26	.141 .051	1.25 1.22	
	5.91	-31.0	19.42	-5.2						.042	.026	2.31	
N5134	13 22.59	-20 52.5	313.43	138.4	.SAS35.	38	W100V			1.44	.22	1.39	
N5141	13 22.59	36 38.3	87.54	12.2	.L.....	-2	S 4 P048N	DS *G	4VS	.041	.030	1.42	
N5142	13 22.76	36 39.5	87.48	82.2	.L.....	-2	1.9 P048N			1.22	.11	1.19	
MK452	13 22.95	-29 34.4	311.76	147.1	.SBS2..	2	1.5 W100V			1.05	.16	1.02	
N5135	13 23.53	58 5.0	114.22	60.0	.I..9..	10	3.2 P048N		4	.042	.045	1.05	
A1323+58	13 23.53	58 5.0	114.22	60.0	.I..9..	10	3.2 P048N			1.38	.37	1.29	
D175	13 23.87	-31.0	58.72	17.3		9	2.5			.049	.039	1.32	
A1323+21	13 23.85	-21 58.8	313.54	140.0	.I..9..	10	P048N			1.51	.13	1.48	
D174	13 23.78	-30.9	39.91	1.1	I	9	1.8			.046	.045	1.17	
N5147	13 23.78	21 21.7	322.88	116.5	.SBS8..	8	W060V	SI *AF		1.26	.07	1.25	0.85
A1323+57	13 23.96	57 30.6	113.82	60.6	S S K -	4	2.8	SI *A	1	.033	.027	1.26	.03
MK 66	13 24.10	2 34.4	323.20	116.6						.70	.17	.66	
N5148	13 24.10	2 34.4	323.20	116.6	.SBS75.	7	P048C	L*		1.02	.01	1.02	
A1324+20	13 24.3	20 13	353.21	99.0	.S...4..	4	1.6 P048N			1.058	.053	1.03	
	4.86	-30.9	79.20	12.5			1.7			1.12	.09	1.10	
N5140	13 24.37	-33 36.4	311.38	151.1	.LXT0*.	-2*	P048C			.039	.038	1.12	
A1324+26	13 24.50	26 50.7	31.02	92.3									
MK454	13 24.6	32 28	68.47	86.6	.SA.5..	5	P048N			1.12	.35	1.04	
A1324+32	13 24.6	32 28	68.47	86.6						.075	.100		
N5150	13 24.81	-29 18.2	312.28	147.0	.S8.3*.	3	P048C			1.29	.25	1.23	
N5164	13 25.23	55 44.7	112.51	62.5	.SBS3..	3	P048N			.039	.038	1.25	
MK257	13 25.7	-30.9	60.91	17.4						1.16	.00	1.16	
N5156	13 25.7	-48 39	309.23	165.6	.SBR2..	2	S030V			.061	.058	1.19	
N5169	13 26.06	46 55.9	105.01	71.7	.SHT3*.	3*	W060V			1.08	.03	1.07	
A1326+31	13 26.1	31 5	59.70	88.0	.S...4..	4	P048N			.039	.038	1.09	
N5173	13 26.31	46 51.1	104.81	71.8	.E.0*.	-5	W060V		3	1.11	.24	1.06	
N5161	13 26.40	-32 54.9	311.98	150.6	.SAS5*.	5	C060C			1.11	.039	1.08	
	5.70	-30.8	29.03	-1.6	S	7*	3.5			1.12	.02	1.12	
I4263	13 26.44	47 11.1	105.13	71.4	.SBS7*/	7	P048C			.065	.053	1.15	
A1326+44	13 26.58	44 11.3	101.25	74.5						1.73	.36	1.64	
MK259	13 26.81	53 42.1	110.73	64.6						.035	.031	1.67	
A1326+53	13 26.89	17 18.6	345.89	102.0	.SXT4*.	4*	W060V	S FG		1.30	.59	1.16	
MK258	13 27.12	-17 42.4	43.96	3.2	S 4	2	3.2		3 5	.047	.044	1.17	
N5170	13 27.12	-17 42.4	43.96	3.2	.SAS5*/	5*	W100V	S GK		1.52	.24	1.47	
	5.43	-30.7			S N **		3.8			.034	.029	1.49	
A1327+45	13 27.53	45 38.8	102.79	73.0	.SX.8..	8	P048N			.81	.172		
D176	13 27.74	58 40.7	113.51	59.4	SX	8	1.8			.030	.024	1.74	
N5204	13 27.76	47 27.3	104.87	71.2	.SAS4*.	4	4.6	IS *F	2	1.36	.48	1.24	
N5194	13 27.87	47 31.8	104.90	71.1	.S 5 T -	1	5.0			.039	.038	1.25	
N5195	13 28.07	46 55.7	104.13	71.7	.I..0.P.	0	.....V	S FG	45	1.68	.20	1.63	
N5198	13 28.07	46 55.7	104.13	71.7	P T -		5.0	S FG		.030	.022	1.64	
	4.25	-30.7	69.02	17.3	.E.1*.	-5*	W060V	IEP*	4	2.04	.15	2.00	1.60
A1328+31	13 28.34	31 32.3	61.17	87.7	E 2		3.0	E P*F *		.032	.021	.05	
MK455	13 28.34	47 30.4	104.68	71.1				F2 K	3	1.73	.10	1.70	1.25
I4278	13 28.62	-34 32.3	312.19	152.2	.LBS9*.	10	P200C	S K	04VS	.040	.029	1.73	.03
N5188	13 29.00	-32 58.9	312.58	150.8	.SHT3*P	3*	C060C			1.33	.06	1.32	
N5193A	13 29.05	-32 58.6	312.60	151.6	.LB..P.	-3	P048C			.060	.043	1.35	
N5193	13 29.11	75 49.4	119.75	41.4	E 2 P*					.84	.15	.80	
A1329+75A	13 29.11	75 49.4	119.75	41.4						.042	.045		
MK261	13 29.2	75 51	119.75	41.4									
A1329+75C	13 29.2	75 51	119.75	41.4									
A1329+75B	13 30.40	62 57.4	115.06	54.9	.E.0.P.	-5	P200V			.89	.38	.80	
MK262	13 30.45	63 1.4	115.08	54.8	.SBS35P	3	P200V			.075	.100		
N5218	13 31.68	69 7.0	117.37	48.4						1.25	.04	1.24	
A1331+69	13 31.68	69 7.0	117.37	48.4						.183	.085	1.29	
MK263	13 31.98	48 10.3	103.96	70.5									
N5229	13 32.1	34 57	75.02	84.3	.SRS75/	7	P048C						
N5223	13 32.1	34 57	75.02	84.3	.E.1..	-5	P048N						
I0900	13 32.2	9 36	334.84	110.0	.SXS4..	4	P048N			.044	.040	1.37	
A1332+33	13 32.45	-33 38.5	313.25	151.6						1.25	.06	1.24	
	5.76	-30.4	28.09	-6						.071	.071	1.27	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _N N _N (24)	α ₋ α ₊ (25)	Log S _H N _N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
I4237				.28											-164	S
N5121	12.5			.42											-208	
A1322+36	12.46		14.0	.19										4794 0 2 71	4855 61	
N5121A				.41											-207	
N5128	7.2* 7.79	7.96 .10	13.9	.51 7.40	.98 .07				.85	5.12 3 1 1	.65 .63		-3.61	541* 3 7 8	323 -218	PT
N5134	12.4 12.39	"	13.9	.28	"	"									-164	
N5141		13.8 .15	14.5	.19 13.49	.98 .06	.41 .07			.88 .38	1.94 2 2 1	.56 .45		-1.74	5223 0 2 33	5283 60	
N5142		14.2 .15	13.9	.19 .33	.95 .06	.31 .07									60	
N5135	12.8 12.94		13.8	.24								.88 1 .01		1520 1 0 15	-188 1662 142	
A1323+21				.28								.52 1 .01		1441 1 0 20	1275 -166 1040	
N5147	12.1 12.21	12.29 .08	12.0 13.3	.21 12.02	0.50 .03	-.15 .03	0.56 .03	-.03 .03	.43 -.20					1120 0 1 64	-80 6485 140	
A1323+57		15.1 .15		.24	.41 .06	-.34 .07								6345 0 1 95		
N5148				.21											-79	
A1324+20				.21										7146 1 1 19	7140 -6	
N5140		12.80 .08	12.8	.37	0.99 .03	0.50 .06	1.00 .03	0.54 .06						3728 0 1 30	3531 -197	T
A1324+26				.20										6956 0 2 71	6977 21	
A1324+32				.19										5273 1 1 10	5317 44	
N5150	13.1 13.26		13.9	.33											-186	
N5164				.23										4773 0 1 220	4907 134	
N5156	12.9 12.75		14.2	.69											-225	
N5169				.21											103	
A1326+31		15.3 .15	15.1	.19 14.87	"	"								7180 0 1 165	7220 40	
N5173		"		.21	"	"								2404 0 1 50	2506 102	
N5161	12.5 11.95		14.5	.37										2212 0 1 50	2018 -194	PST
I4263				.21											104	
A1326+44				.21										8339 0 1 220	8431 92	
A1326+53				.23										7565 0 2 71	7693 128	
N5172	12.5 12.28	12.60 .09	14.4	.21	0.73 .04	0.10 .04	"	"							-16	
N5170	12.6 11.97		14.3	.27											-150	
A1327+45				.21								.87 2 .02		1300 2 0 9	1399 99	
N5204	12.2 11.83	11.75 .09	14.5	.24 11.33	0.49 .03	"	"	.39						2 1 206	351	T
N5194	10.1 9.44	8.95 .08	12.4 13.6	.21 8.62	0.60 .04	"	0.68 .03	0.04 .03	.52	2.33 9 8 3	.65 2.10		.69 2.16	2 .01 2.04*	145 565	PT
N5195	11.1 10.76	10.53 .06	12.3 13.8	.21 10.24	0.90 .03	0.40 .05	1.00 .03	0.44 .04	.83 .34			4 .01	2.05	4 8 4 552	105 658	PST
V 1														0 4 16	106	
N5198	12.9			.21										2488 0 2 44	2592 104	
I2 59	12.60		14.1													
A1328+31				.19										10195 0 1 100	10238 43	
V326															106	
I4278				.21										2326 0 1 13	2129 -197	T
N5188	12.7			.39										3519 0 1 37	3326 -193	T
N5193A				.37										3644 0 1 39	3451 -193	T
N5193	12.6 12.58		13.6	.37												
A1329+75A				.33										9235 0 1 220	9430 195	
72518				.33										8985 0 1 86	9180 195	
A1329+75C				.33										8936 0 1 220	9131 195	
A1329+75B				.33												
N5216		"		.26	"	"									160	P
V 33															160	P
N5218		13.1 .15	14.0	.26	.79 .06	.26 .07										
V 33																
A1331+69				.29										1552 0 1 220	1730 178	
N5229				.21											110	
N5223				.19										7165 0 1 86	7224 59	
10900				.21										7067 1 1 16	7023 -44	
A1332-33				.38										3834 0 1 22	3642 -192	T

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (100P) (2)	Dec (100P) (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log Do (12)	Log Ae m.e. (13)
A1332+45	13 32.5 6.07	-45 25 -30.4	310.95 16.51	162.8 -4.3	.I..9*/	10*	C060C						
A1332+34A	13 32.59 4.55	34 18.6 -30.5	72.16 78.38	84.9 16.8	.S.....		P048N			.99 .050	.58 .050	.85 .87	
A1332+34B	13 32.69 4.55	34 17.8 -30.4	72.05 78.37	85.0 16.8	.S..5P.	5	P048N			1.11 .039	.12 .038	1.08 1.10	
N5227	13 32.8 5.13	1 40 -30.4	327.04 62.21	117.8 10.1	.SB.3..	3	P048N			1.29 .039	.06 .038	1.27 1.29	
A1332+34C MK459	13 32.90 4.55	34 17.2 -30.4	71.89 78.34	85.0 16.9									
N5230	13 33.08 4.93	13 55.8 -30.4	342.55 73.06	105.7 13.2	.SASS..	5	W060V	S AF		1.35 .035	.05 .030	1.34 1.36	
A1333+29	13 33.3 4.65	29 29 -30.4	47.69 80.05	89.9 16.3	S 5	2	3.0		3VS	1.10 .042	.55 .045	.97	
A1333+46 D178	13 33.62 4.22	46 11.0 -30.4	100.79 69.25	72.6 18.2	.S..9..	9	P048N			1.16 .039	.00 .038	1.16 1.17	
I4296	13 33.78 5.76	-33 42.7 -30.3	313.54 27.97	151.8 -4	.E.0...	-5	P048C						1.20 .04
I4299	13 33.93 5.77	-33 48.7 -30.3	313.56 27.87	151.9 -4	.SX51*	1	P048C						0.70 .03
N5243	13 34.0 4.44	38 36 -30.4	85.85 75.38	80.5 17.6	.S.....		P048N			1.23 .039	.48 .038	1.12 1.14	
N5236	13 34.17 5.68	-29 36.8 -30.3	314.58 31.0	147.9 11.0	.SX55..	5	W100V	S FG	5	2.05 .022	.04 .015	2.04 2.07	
A1334+46 D177	13 34.17 4.21	46 27.1 -30.4	100.93 68.97	72.3 18.3	.SB57..	7	P048N			1.23 .039	.07 .038	1.21 1.22	
A1334+07 D179	13 34.93 5.03	7 53.9 -30.3	334.28 67.67	111.8 12.2	.I..9..	10	P048N			1.52 .046	.24 .045	1.46 1.47	
N5248	13 35.05 5.01	9 8.5 -30.3	335.94 68.75	110.6 12.6	.SXT4..	4	P200V	S F	2 5	1.81 .028	.12 .020	1.78 1.80	1.30 .02
A1335+33	13 35.20 5.77	-33 37.3 -30.3	313.89 28.00	151.8 -1		-5*				.92 .075	.38 .100	.83	
N5247	13 35.35 5.45	-17 37.8 -30.3	318.33 43.59	136.6 5.0	.SAS4..	4	W060V	S F	3	1.73 .027	.06 .020	1.71 1.73	1.40 .05
A1335+09 D180	13 35.53 5.31	-9 33.0 -30.3	321.58 51.37	128.9 7.6	.S..9..	9	P048F			1.33 .061	.00 .058	1.33 1.34	
N5256 MK266	13 36.25 5.76	48 31.9 -30.2	102.73 68.8	70.1 18.8	.P.....	8*	P048N			1.16 .039	.05 .038	1.15 1.18	
N5254	13 36.98 5.34	-11 14.5 -30.2	321.36 49.65	130.6 7.4	.SAT5..	5	P048C			1.50 .051	.25 .042	1.44 1.46	
N5253	13 37.09 5.73	-31 23.4 -30.1	314.87 30.10	149.8 1.0	.I.0.P.	0	W100V	IDP*FG*		1.60 .032	.36 .022	1.51 1.55	0.80 .03
N5266A	13 37.3 5.21	-48 6 -30.2	311.28 13.72	165.6 -4.4	.SA.6*	6*	S030V			1.50 .183	.13 .112	1.47 1.52	
N5257	13 37.33 5.14	1 5.6 -30.2	328.80 61.26	118.7 11.0	.SX53P.	3	P200V		3VS	1.28 .039	.25 .031	1.22 1.24	
N5258	13 37.41 5.14	1 5.1 -30.1	328.84 61.24	118.7 11.0	.SAS3*P	3	P200V			1.25 .039	.14 .032	1.21 1.23	
A1337+43 MK267	13 37.47 4.28	43 18.3 -30.2	94.52 71.32	75.6 18.7						.79 .075	.18 .100	.75	
N5260	13 37.6 5.57	-23 36 -30.1	317.11 37.67	142.5 3.7	.SB54..	4	P048C			1.28 .061	.00 .058	1.28 1.31	
A1337+40 D181	13 37.73 4.35	40 59.4 -30.2	89.74 73.12	78.1 18.6	.I..9..	10	P048N			1.39 .046	.24 .045	1.33 1.34	
A1338+54	13 38.76 3.94	54 35.2 -30.1	107.92 61.34	63.7 19.3	.SBTS..	5	P048C			1.44 .039	.18 .032	1.39 1.41	
N5264 D242	13 39.78 5.70	-29 39.7 -30.0	315.72 31.71	148.3 1.9	.I..9..	10	P048N			1.25 .046	.17 .045	1.21 1.23	
A1339+30 MK 67	13 39.66 4.59	30 46.3 -30.0	52.97 78.44	88.8 17.8		8	1.9			.43 .050	.04 .050	.42	
N5283	13 39.68 2.85	67 55.6 -30.1	115.82 48.76	49.6 18.9	.L...S.	-28	P048N			1.13 .042	.04 .045	1.12 1.16	
N5278 MK271	13 39.80 3.76	55 55.3 -30.0	108.73 60.05	62.3 19.5	.SAS38P	3	P200V		4VS	1.15 .051	.13 .041	1.16 1.14	
N5279 MK271	13 39.86 3.76	55 55.5 -30.0	108.71 60.04	62.3 19.5	.SR51P.	1	P200V		4VS	1.10 .053	.13 .049	1.07 1.10	
N5266	13 39.9 6.23	-47 56 -30.0	311.75 13.80	165.6 -3.9	.LA..*	-3	S030V		3 S	1.51 .112	.19 .054	1.47 1.57	
N5273	13 39.92 4.47	35 54.5 -30.0	74.37 76.24	83.5 18.5	.LA50..	-2	P200V	D GK	D3 S	1.49 .053	.06 .035	1.48 1.51	0.95 .06
N5276	13 40.15 4.47	35 52.7 -30.0	74.15 76.22	83.5 18.6	.SX53..	3	P200V			1.05 .035	.25 .031	.99 1.01	
A1340+39 D182	13 40.38 4.36	39 54.4 -30.0	85.90 73.58	79.3 19.0	.I..9..	10	P048N			1.36 .100	.00 .100	1.36 1.37	
A1340+61	13 40.6 3.44	61 2 -30.0	112.07 55.26	56.9 19.4	.S..6*	6*	P048N			1.27 .039	.59 .038	1.13 1.15	
A1342+37	13 42.4 4.41	37 28 -29.9	78.23 74.92	81.9 19.2									
A1342+56 MK273	13 42.85 3.71	56 8.3 -29.9	108.12 59.68	62.1 19.9	.P.....		P048N			1.11 .039	.57 .038	.97 .98	0.50 .05
A1342+27 MK 68	13 42.99 4.65	27 22.2 -29.8	35.98 78.02	92.5 18.1									
N5289	13 43.01 4.28	41 45.3 -29.8	88.92 71.89	77.4 19.6	RSX.2*/	2	P048C			1.29 .037	.45 .034	1.19 1.21	
N5290	13 43.19 4.28	41 57.8 -29.8	89.29 71.71	77.1 19.7	.S..3*/	3*	P048C			1.57 .034	.53 .028	1.44 1.46	
N5296	13 44.23 4.20	44 6.1 -29.7	93.02 69.95	74.9 20.0	.L...*	-1*	P048C			1.07 .041	.25 .041	1.02 1.05	
N5297	13 44.32 4.20	44 7.4 -29.7	93.02 69.92	74.9 20.0	.SX54*/	4	P048C		3 S	1.75 .032	.59 .027	1.61 1.63	
N5301	13 44.36 4.12	46 21.4 -29.7	96.71 68.12	72.5 20.1	.SAS3*/	3	P048C		2VS	1.64 .035	.61 .030	1.50 1.52	
N5293	13 44.46 4.86	16 31.3 -29.7	355.57 73.18	103.7 16.5	.SARS..	5	W100V	S F *		1.29 .035	.08 .031	1.27 1.29	
N5291	13 44.57 4.74	-30 9.7 -29.7	317.01 30.93	149.2 2.9	.E...P*	-5	B060V		3VS	1.14 .069	.18 .066	1.10 1.15	
A1344+34B	13 44.80 4.48	34 8.5 -29.7	65.82 76.27	85.4 19.3	.SB57*/	7	P048C			1.27 .039	.65 .038	1.12 1.13	
N5292	13 44.81 5.76	-30 41.6 -29.7	316.92 30.40	149.7 2.8		-2*				1.21 .075	.00 .100	1.21	

NGC, IC, A Zw,VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _C (15)	B _T m.e. (16)	m _s m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _c m.e. (21)	(U-B) _c m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _N N _O N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	ΔV ΔV (29)		
A1332-45				.59											982	765	
A1332+34A				.19											0 1 140	-217	
A1332+34B				.19											7335	7392	
N5227				.22											0 1 86	57	
A1332+34C				.19											7065	7122	
															0 1 86	57	
															5240	5164	
															1 1 9	-76	
															7095	7152	
															0 2 47	57	
N5230	12.9			.21													
A1333+29	12.75	15.2	14.2	.19	.58	-.29						.17			840	-26	
A1333+46		.15		.21	.06	.07						1 .03			1 1 16	878	
												.35			1449	38	
I4296		11.58	13.1	.38	1.01	0.60	1.02	0.62		2.77	1.07	1 .01			1 0 70	104	
I4299		.07		.38	.03	.04	.02	.03		3 2 2	1.24*				3629*	3437	T
		13.70	12.7		1.03	0.58	1.05	0.62							0 3 29	-192	
		.08			.03	.03	.03	.03							4028	3836	T
															0 1 44	-192	
N5243				.19													
N5236	8.0*	8.2		.34	"	"	"	"		2.44	.78	2.87			518	75	
A1334+46	8.84	.3	13.2	7.85						13 4 8	1.01	5 .01	2.655		5 4 5	337	PST
				.21								.90			2428	-181	
A1334+07				.22								1 .01			1 0 10	2533	
N5248	11.0	10.80	12.8	.21	0.63	0.00	0.73	0.11	.55	1.43	.80	1.62			1054	105	
	10.52	.06	14.4	10.49	.03	.04	.02	.02	-.06	5 2 5	.77	2 .01	2.53		1 0 10	1005	
													2.02		1146	1102	PT
															2 3 8	-44	
A1335-33				.38													
															3826	3636	T
N5247	11.9	11.1	13.6	.27	0.59	-.10	0.67	-.02	.51	1.115	1.135	.56			0 1 21	-190	
A1335-09	11.24	.13	14.4	10.77	.05	.05	.04	.04	-.16	3 0 1	1.135	1 .01	3.045		1655	1511	P
				.24								.94	4.39		1 0 17	-146	
N5256				.21								1 .01			1301	1185	
12 67															1 0 10	-116	
N5254				.25											8257	8371	
															0 2 70	114	
																-121	
N5253	10.8	10.99	10.5	.36	0.44	-.20	0.32	-.47	.29			1.43			392	209	
	11.09	.09	12.9	10.37	.03	.03	.03	.02	-.30			2 .02	2.60		2 7 5	-183	PS
N5266A				.69													
N5257				.22													
V 55				.22											6865	6791	P
N5258															0 1 95	-74	
V 55															6689	6615	P
A1337+43		15.0		.20	.48	-.18									0 1 95	-74	
		.15			.06	.07									3594	3689	
															0 1 220	95	
N5260				.30											6539	6378	
A1337+40				.20											0 1 20	-161	
															0 1 201	288	
A1338+54		13.35		.23								.79			1 0 7	87	
		.11	14.9	12.96								1 .01			1 0 10	2155	PT
N5264				.35											1 1 10	136	
												.98			485	307	
A1339+30				.19								1 .01			1 0 20	-178	
															1065	1113	
															0 1 95	48	
N5283		"		.28	"	"											
															2697	2875	
N5278				.24											0 2 43	178	
12 69=V 19															7569	7710	P
N5279				.24											0 2 25	141	
12 69=V 19															7603	7744	P
N5266	12.8			.69											0 2 25	141	
	12.25																
N5273	12.9	12.43	14.2	.19	0.86	0.36	0.86	0.40	.80						1022	-217	
	12.34	.05	14.6	12.20	.02	.03	.02	.03	.32						0 1 20	1090	PT
																68	
N5276				.19													
A1340+39				.19								.51			664	68	
												1 .01			1 0 10	748	
A1340+61				.25												84	
A1342+37				.19													
12 70															7875	158	
A1342+56		14.8	12.8	.24	0.88	0.05	0.81	0.05	.62						0 1 185	76	
12 71		.13	13.8	13.98	.04	.05	.03	.04	-.18						11390	11533	
															0 2 43	143	
A1342+27				.20													
															5194	5230	
N5289				.20											0 1 105	36	
N5290				.20													
N5296				.20													93
																	94
N5297	13.0			.20													102
	12.42		14.5														102
N5301	13.0			.21													
	12.66		14.2												1562	1673	
N5293				.22											0 1 71	111	
															5787	5781	
N5291				.35											1 1 9	-6	
															4326	4151	T
A1344+34B				.19											0 1 18	-175	
V317															4952	5016	
N5292				.36											0 1 95	64	
															4442	4266	T
															0 1 24	-176	

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log Do (12)	Log A _e m.e. (13)	
A1344+34A	13 44.89	34 7.8	65.74	85.4	.SB57..	7	P048C			1.17	.07	1.16		
	4.48	-29.7	76.26	19.3			1.8			.039	.038	1.17		
A1345+34	13 45.07	34 23.9	66.68	85.2	.S.....		P048N			.93	.12	.90		
MK461	4.47	-29.7	76.10	19.4			1.3			.039	.038	.92		
N5298	13 45.34	-30 12.4	317.19	149.3	.SBT3..	3	R060V			1.16	.26	1.10		
	5.75	-29.6	30.84	3.1			2.6			.054	.047	1.14		
N5308	13 45.35	61 13.3	111.26	56.7	.L...-/	-3	W060V	D K	4	1.54	.65	1.38	*	
	3.35	-29.7	54.88	20.0	E 8		2.8	n K	4	.036	.028	1.42		
N5303	13 45.6	38 33	79.91	80.8	.P.....		P048N			1.06	.27	.99		
	4.36	-29.7	73.75	19.9			1.4			.039	.038	1.01		
N5300	13 45.74	4 11.9	335.76	116.2	.SAR5..	5	P048C			1.59	.16	1.55		
	5.08	-29.6	63.14	13.9	S 5	3	2.6	S A		.035	.030	1.57		
A1345-30	13 45.80	-30 34.0	317.19	149.7		-2*				1.14	.48	1.03		
	5.76	-29.6	30.47	3.0						.075	.100			
I4327	13 45.89	-29 58.3	317.39	149.1	.SAS5..	5	R060V			1.01	.15	.97		
	5.74	-29.6	31.04	3.3			2.2			.055	.047	1.00		
N5302	13 45.98	-30 15.9	317.33	149.4	.LBS+..	-1*	R060V			1.23	.13	1.20	0.85	
	5.75	-29.6	30.75	3.2			2.7			.066	.060	1.25	.05	
I4329	13 46.24	-30 3.0	317.45	149.2	.L...-S	-3*	W100V		4	1.51	.21	1.44	1.02	
	5.75	-29.6	30.94	3.3	E 3		3.5		3	.224	.105	1.49	.04	
A1346+31	13 46.42	31 42.6	55.51	88.0						1.12	.00	1.12		
MK275	4.53	-29.6	76.80	19.4						.075	.100			
I4329A	13 46.47	-30 3.7	317.51	149.2	.SA.0*/	0*	PG48C			1.12	.49	1.00	0.50	
	5.75	-29.5	30.92	3.4			1.6			.075	.100	1.04	.05	
A1346+26	13 46.56	26 50.6	33.83	93.1						1.12	.00	1.12		
	5.76	-29.6	77.19	18.8						.075	.100			
N5304	13 47.17	-30 19.9	317.59	149.6	.E.4..*	-5*	R060V			.98	.10	.96		
	5.76	-29.5	30.62	3.4			2.2		3	.075	.100	1.02		
N5322	13 47.59	60 26.4	110.29	57.5	.E.3..*	-5	W060V	F4 K	3	1.74	.15	1.70	1.30	
	3.38	-29.6	55.49	20.3	E 2		3.7	E4 K	03	.053	.036	1.74	.06	
N5313	13 47.61	40 13.9	83.42	79.0	.S...3S	3S	P048C			1.28	.21	1.23		
	4.30	-29.5	72.36	20.4	S 3	3*	1.9	S AF		.036	.032	1.25		
N5320	13 48.22	41 37.0	86.38	77.6	.SXT5..	5	P048C			1.54	.26	1.48		
	4.25	-29.5	71.32	20.6			2.4			.037	.035	1.50		
A1348+38	13 48.67	38 15.8	77.80	81.1	.I...9..	10	P048N			1.35	.45	1.25		
D183	4.35	-29.4	73.45	20.5	I	8	1.8			.039	.038	1.26		
N5326	13 48.71	39 49.2	81.93	79.5	.SA.1..*	1	P048C			1.39	.27	1.32		
	4.30	-29.4	72.47	20.6	S 2	5				.036	.033	1.34		
I0954	13 48.9	71 25	116.39	45.8	.P.....		P048N			1.10	.27	1.04		
	2.15	-29.5	45.20	19.3			1.5			.071	.071	1.07		
A1349+40	13 49.29	40 27.7	83.28	78.8						.93	.00	.93		
MK462	4.28	-29.4	71.97	20.7						.075	.100			
N5324	13 49.49	-5 48.7	329.02	126.3	.SAT5..*	5	W100V	S AF	D3	1.38	.01	1.38		
	5.26	-29.4	53.71	12.0	S 5	4	3.6			.044	.033	1.40		
N5328	13 50.04	-28 14.6	318.96	147.8	.E.1..*	-5*	W100V			1.23	.08	1.27		
	5.72	-29.3	32.46	4.7	E 2		3.2			.062	.049	1.26		
N5330	13 50.13	-28 13.4	318.99	147.8		-5*								
	5.72	-29.3	32.48	4.7										
N5334	13 50.34	-0 52.1	333.05	121.5	.SBT5..*	5	W060V	SX A		1.64	.12	1.61		
	5.17	-29.3	58.12	13.6	S 6	8	3.5			.039	.032	1.63		
A1350+64.	13 50.41	64 37.1	112.50	53.0						.85	.43	.75		
MK277	2.98	-29.4	51.51	20.3						.042	.045			
N5347	13 51.09	33 44.0	62.19	86.0	.PSB52..	2	P048C			1.27	.08	1.25	*	
	4.46	-29.3	75.23	20.6	SX4	5	2.0			.036	.033	1.27		
N5339	13 51.2	-7 41	328.46	128.3						1.32	.00	1.32		
	5.30	-29.2	51.82	11.8						.075	.100			
N5350	13 51.26	40 36.5	82.84	78.7	.SBR3..*	3	W060V	R F		1.51	.10	1.49	1.1	
	4.26	-29.3	71.59	21.1	S 3	1	3.0	RS *F	4VS	.034	.029	1.51	.1	
N5351	13 51.31	38 9.6	76.45	81.3	.SAR3..*	3*	W060V	S AF		1.49	.24	1.43	1.20	
	4.33	-29.3	73.09	21.0	S 4	3	3.1		3 S	.033	.028	1.45	.05	
N5353	13 51.35	40 31.5	82.60	78.8	.L....-/	-2	W060V			1.45	.26	1.39	0.85	
	4.26	-29.3	71.63	21.1	E 5		3.0	E7 K	3VS	.059	.042	1.42	.04	
N5354	13 51.35	40 32.7	82.65	78.7	.L....-/	-2	W060V			1.36	.05	1.34	0.88	
	4.26	-29.3	71.62	21.1			3.0			.065	.052	1.37	.04	
N5348	13 51.68	5 28.4	340.04	115.3	.SB.4..*	4	P048C			1.56	.76	1.38		
	5.06	-29.2	63.48	15.6			1.9			.038	.037	1.40		
A1351+69	13 51.86	69 33.2	115.05	47.8	.L.....	-2	0048N			1.08	.23	1.02	*	
MK279	2.37	-29.3	46.87	19.8			1.5			.042	.045	1.06		
A1352+15	13 52.1	15 17	356.63	105.4	.RLB....	-2	P048N			1.14	.04	1.13		
	4.87	-29.2	70.99	18.0			1.8			.050	.050	1.16		
N5356	13 52.47	5 34.7	340.54	115.3	.SA.4..*	4	P048C			1.50	.49	1.38		
	5.05	-29.2	63.47	15.9			2.1			.036	.033	1.40		
N5368	13 52.67	54 34.6	104.21	63.7	.PSX.2S.	2	P048C			1.06	.09	1.04		
	3.67	-29.2	60.44	21.3			1.6			.039	.038	1.06		
N5362	13 52.81	41 33.6	84.44	77.7	.S...3SP	3S	P048C			1.38	.32	1.31		
	4.22	-29.2	70.74	21.4	S 3 N		2.0			.036	.032	1.33		
A1352+54	13 52.94	54 8.8	103.70	64.1	.SBS9..*	9	P048C			1.60	.46	1.49		
D185	3.69	-29.2	60.80	21.4	I 3	8	2.3			.039	.032	1.50		
A1353+18	13 53.02	18 2.2	3.94	102.6	.I...9..	9	P048N			1.56	.15	1.53		
D184	4.81	-29.1	72.55	18.8			2.5			.052	.050	1.54		
N5357	13 53.12	-30 5.8	319.10	149.8	.E.1...*	-5	P048C							
	5.78	-29.1	30.50	4.7	E 0					1.31	.36	1.22		
N5360	13 53.14	5 13.7	340.43	115.7	.I.0...*	0	P200V			.036	.032	1.25		
N5365A	13 53.3	-43 45	315.10	162.5	.SB.3S/	3*	S030C			1.41	.63	1.26		
	6.19	-29.1	17.34	-3			1.5			.141	.088	1.32		
N5371	13 53.55	40 42.4	82.19	78.6	.SXT4..*	4	W100V	S F	3	1.64	.08	1.62	1.27	
	4.24	-29.1	71.20	21.5	S 4	1	4.0	S FG	D3VS	.031	.024	1.64	.02	
N5363	13 53.61	5 30.0	340.97	115.4	.I.0.S.	0S	W100V	E7P	2	1.62	.19	1.57	0.95	
	5.05	-29.1	63.25	16.1	E P		3.9		3	.048	.031	1.60	.1	
N5376	13 53.62	59 45.1	108.57	58.1	.SKR3S.	3S	W060V	S FG		1.33	.18	1.29		
	3.34	-29.1	55.80	21.1	S 0*		2.8	SD FG	3 S	.035	.031	1.31		
N5364	13 53.69	5 15.6	340.72	115.7	.SAT4P.	4	P200V	S FG	2	1.85	.15	1.81	1.45	
	5.06	-29.1	63.03	16.1	S 4P	1	5.0		3 S	.026	.019	1.83	.04	
N5379	13 53.93	59 59.2	108.69	57.9	.SAR3S.	3S	W060V			1.35	.32	1.27		
	3.32	-29.1	55.58	21.1			2.7		3VS	.042	.037	1.29		
N5377	13 54.29	47 28.9	94.92	71.3	.RSBS1..	1	W100V	SD *GK	3*	1.66	.23	1.60	*	
	3.99	-29.1	66.21	21.8	S 0P		3.9	DS *GK	5 S	.042	.035	1.62		
N5389	13 54.48	59 59.1	108.58	57.9	.SXR0*S	0S	W060V			1.61	.50	1.49		
	3.31	-29.1	55.55	21.2			3.1		4	.040	.034	1.52		

NGC, IC, A Zw, VV (14)	Magnitudes				Color indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _B N _B N _B N _B (24)	α ₋ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _B N ₀ m.e. (28)	V ₀ ΔV (29)	
A1344+34A V317 A1345+34 N5298				.19										4485 0 1 95 4834 0 2 71	4549 64 4900 66	
N5308	12.8	12.20		.25	0.89		*		.78					1972	-175	
N5303	12.49	.08	13.1	11.79 .19	.03									0 2 46	2132 160	
N5300	12.3	*		.23	*	*									82	
A1345+30 I4327	11.93		14.3	.36 .35										5235 0 1 24	-55 5060 -175	T
N5302		13.20	12.9	.36	1.00		1.02		.87					3289	-174 3115	T
I4329	12.8	.07 12.55 .08	13.9 13.1 14.2	12.71 .36 12.06	.05 1.01 .05		.04 1.02 .04		.87					0 1 26 4416 0 1 20	-174 4243 -173	T
A1346+31 I4329A				.19										8041 0 1 220	8097 56	
A1346+26		14.15 .08	12.1 13.4	.36 13.37 .21	1.05 .1 1.00	0.3 .1 .44	1.05 .1 .44	0.4 .1 .07	.85 .15					4813* 0 2 18 *	4640 -173	T
N5304		15.2 .15		.36	.06	.07				2.01 6 1 3	.87 1.09			3683 0 1 55 1902	37 -174 2061	T
N5322	11.6 10.87	10.85 .08	12.8 14.2	.25 10.57	0.88 .03	0.44 .06	0.90 .03	0.49 .06	.80 .40					0 1 75	159	
N5313	13.0			.19											90	
N5320	13.15		13.9	.20											95	
A1348+38				.19								.77 2 .02		194 2 0 9	277 83	
N5326	13.1			.19											89	
I0954 72527	13.03		14.2	.30										9005 0 1 266	9194 189	
A1349+40				.19										2370 0 1 100	2462 92	
N5324	12.6	*		.25	*	*									-91	
N5328	12.43 12.9	12.6 .15	14.2 13.5	.34 12.19 .34	.85 .06				.73					4776 0 1 37 4870	4610 -166 4704	T
N5330	12.86													0 1 38	-166	T
N5334	12.5 11.90		14.6	.24											-71	
A1350+64, 72528				.27											2013	
N5347	13.2	13.40		.19	0.76	-.02	*	*						0 1 220	172	
N5339	13.17	.09	14.4	.25	.04	.04									67	
N5350	12.9	12.2	13.2	.19	0.8	0.25	0.9	0.35							-96	
N5351	12.43 13.0 12.70	.2 13.00 .08	14.3 14.5 14.7	.19 14.5 14.7	.1 0.89 .03	.1 0.92 .03	.1 .1 .03	.1 .1 .03							93	
N5353	12.4	12.05	11.8	.19	0.99	0.57	1.01	0.61	.90					2022	2115	
N5354	12.30	.08	13.5	11.73	.02	.03	.02	.03	.51					0 2 23	93	
N5348		12.45 .06	12.3 14.0	.19 12.19 .23	0.99 .03	0.50 .04	1.00 .03	0.55 .04	.91 .47					3003 0 1 95	3096 93	
A1351+69		*		.29	*	*	*	*						9055	9240	
A1352+15				.23										0 1 45	185	S
N5356				.23											-44	
N5368				.23											143	
N5362	13.2			.20											98	
A1352+54	13.14			.23								1.06 1 .02 1.09 1 .01	1.43	1 1 142 1 1 10 966 1 0 10	284 142 972 6	T
A1353+18		13.10 .11	14.8	12.46 .23												
N5357	13.2			.36										4975	4806	T
N5360				.23										0 1 34 1177	-169 1132	P
N5365A				.58										0 2 31	-45	
N5371	11.7	11.40	13.2	.19	0.65	0.15	0.82	0.24	.57			.88 1 .01	3.24	2565 0 2 31	2660 95	
N5363	11.33 11.1 11.10	.06 11.2 .2	14.2 11.4 13.7	11.13 .23 10.82	.03 0.99 .02	.05 0.58 .04	.02 1.04 .02	.02 0.63 .03	.10 .90 .50	1.40* 2 1 3	.06* .51*		2.295	1125 0 2 37	1081 -44	T
N5376	13.0			.25											159	
N5364	13.00		14.0	.23	0.65	*	0.75	0.25	.56					1393	1349	PT
N5379	11.8 10.99	11.05 .07	13.8 14.8	.23 10.69 .25	.04	.03	.03	.05						0 1 150	-44	
N5377	12.8	12.0		.21	0.82		*		.71					1830	160	
N5389	12.17	.2	14.6	11.58 .25	.05									0 1 100	1950 120	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log Do (12)	Log Ae m.e. (13)
N5375	13 54.5 4.55	29 25 -29.0	44.84 75.47	90.7 20.8	.SRR2..	2	P048N 2.6			1.54 .039	.06 .038	1.53 1.55	
N5378	13 54.70 4.31	38 2.6 -29.0	74.86 21.6	81.5 21.6	PSBR1..	1	P048C 2.4			1.43 .037	.07 .035	1.41 1.43	
N5380	13 54.79 4.32	37 51.4 -29.0	74.30 21.6	81.7 21.6	.LA.-..	-3	P048C S 0			1.33 .048	.00 .046	1.33 1.36	
N5365	13 54.8 6.20	-43 42 -29.0	315.39 17.32	162.6 -0	HLBS-..	-3	S030V 2.1			1.49 .183	.11 .091	1.46 1.54	
N5374	13 54.99 5.04	6 20.5 -29.0	342.66 63.75	114.7 16.7	.SHR4S.	4	P048C 2.1		4 S	1.27 .037	.05 .034	1.26 1.28	
N5383	13 55.01 4.18	42 5.6 -29.0	84.79 70.08	77.1 21.9	.SRT3*P	3	W060V S 3	R P FG* R G	5	1.55 .035	.06 .031	1.53 1.55	1.15 .03
I4351	13 55.04 5.47	-29 4.3 -29.0	319.92 31.36	149.0 5.5	.SAS3*P	3	W100V S 3			1.75 .037	.66 .029	1.60 1.64	
A1355+29A	13 55.07 4.56	29 2.5 -29.0	43.33 75.37	91.1 20.9	.S..4P\$	4S	P048C .9			1.75 .061	.18 .058	.71 .73	
MK280	13 55.09 4.56	29 2.1 -29.0	43.30 75.36	91.1 20.9	.E.4.S.	-5S	P048C .8			.75 .075	.24 .100	.70 .73	
A1355+29B	13 55.4 6.21	-43 44 -28.9	315.49 17.26	162.6 .1	.S..4S/	4S	S030C 1.1			1.28 .158	.69 .095	1.12 1.18	
N5387	13 55.90 5.04	6 18.9 -28.9	343.05 63.60	114.8 16.9	.S..5*/	5*	P048C 1.4			1.26 .037	.68 .034	1.10 1.12	
N5394	13 56.42 4.31	37 41.8 -28.9	73.28 22.0	81.9 22.0	.SBS3P.	3	W100V 3.1	S P F *	5	1.28 .034	.22 .030	1.23 1.25	
N5395	13 56.50 4.31	37 40.0 -28.9	73.17 72.50	81.9 22.0	.SAS3P.	3	W100V S 4 T	S AF	3 S	1.49 .031	.25 .025	1.44 1.46	
A1357-45	13 57.7 6.28	-45 10 -28.7	315.50 15.76	164.1 -1	.SBS5*.	5*	S030C 1.9			1.37 .158	.11 .105	1.34 1.39	
N5403	13 57.73 4.28	38 25.5 -28.8	74.86 71.90	81.1 22.2	.SBS3S/	3	P048C 2.1			1.51 .035	.51 .031	1.39 1.41	
N5406	13 58.23 4.26	39 9.4 -28.8	76.64 71.41	80.3 22.4	.SXT4..	4	P048C S 4			1.32 .037	.11 .033	1.29 1.31	
N5398	13 58.44 5.88	-32 49.3 -28.7	319.44 27.55	152.7 14.7	PSB.8SP	8	P048C 2.2	RS FG		1.46 .050	.31 .050	1.38 1.41	
N5422	13 58.94 3.55	55 24.3 -28.8	103.50 59.27	62.7 22.2	.L..../ E 9	-2	W060V 2.9	n GK n K	4 S	1.59 .036	.64 .028	1.44 1.47	
A1358-11	13 58.98 5.38	-11 22.1 -28.7	328.97 47.68	132.5 12.5									
N5430	13 59.14 3.27	59 34.2 -28.7	107.32 55.65	58.3 21.8	.SRS3.. S 3 NT-	3	W060V 2.9	R P F 18P*	4 S	1.38 .036	.19 .032	1.33 1.35	
A1359+37	13 59.25 4.31	37 2.5 -28.7	70.48 72.33	82.6 22.5						.79 .075	.00 .100	.79	
MK465	14 0.3 6.16	-41 10 -28.6	317.16 19.47	160.6 1.9	.I..9..	10	P048B						
N5433	14 0.3 4.43	32 45 -28.6	56.48 73.70	87.2 22.4	.S..9..	9	P048N			1.24 .039	.55 .038	1.11 1.12	
N5443	14 0.48 3.49	56 3.4 -28.6	103.81 58.60	62.0 22.3	.SBS3S.	3	P048C 2.1			1.45 .037	.37 .034	1.36 1.38	
N5419	14 0.70 5.92	-33 44.3 -28.5	319.63 26.54	153.8 4.8	.E+....	-5	P048C						
N5440	14 0.8 4.37	35 0 -28.6	63.83 72.90	84.8 22.7	.S..1..	1	P048N 2.3			1.52 .039	.36 .038	1.44 1.46	
N5426	14 0.80 5.27	-5 49.8 -28.6	333.26 52.51	127.2 14.7	.SAS5P. S 5 T	5	P200V 4.1	S *FG	03	1.46 .030	.25 .022	1.40 1.42	1.05 .05
N5427	14 0.81 5.27	-5 47.5 -28.6	333.29 52.55	127.2 14.7	.SAS5P. S 5 NT	5	P200V 4.2	S *FG	4	1.40 .029	.03 .022	1.39 1.41	
N5448	14 0.93 3.84	49 24.8 -28.6	95.73 64.01	69.2 22.9	RSXR1.. S 4	1 4	W060V 3.3	S P FG	4 S	1.62 .032	.31 .026	1.55 1.57	
A1401+69	14 1.05 2.14	69 43.3 -28.7	114.07 46.41	47.5 20.5									
MK282													
A1401+11	14 1.2 4.92	11 37 -28.5	353.55 66.85	109.7 19.4	.S..3..	3	P048N 1.7			1.16 .039	.23 .038	1.11 1.13	
N5444	14 1.24 4.35	35 22.3 -28.6	64.88 72.68	84.4 22.8	.LA.-..	-3	P048C E 1			1.43 .066	.06 .055	1.42 1.45	
N5457	14 1.46 3.57	54 35.6 -28.6	102.05 59.77	63.6 22.6	.SXT6..	6	...V S 5	S F S F	2	2.43 .01	.24 .019	2.05 1.45	2.05 .05
I4366	14 1.52 5.92	-33 32 -28.4	320.03 26.64	153.7 5.2	.SAR5P.	5	P048C 1.5			1.20 .061	.14 .058	1.16 1.19	
A1402-00	14 2.3 5.17	-0 22 -28.4	338.40 57.12	121.9 16.6	.SXS4..	4	P048N 1.5			1.11 .039	.27 .038	1.05 1.07	
A1402+09	14 2.3 4.97	9 4 -28.5	349.81 64.79	112.4 19.1	.SX.8..	8	P048N 2.0			1.36 .039	.25 .038	1.30 1.32	
N5473	14 2.98 3.52	55 7.9 -28.5	102.27 59.20	63.0 22.8	.LXS-..	-3*	W060V E 2	E2P* BD K	3 4 S	1.41 .043	.15 .032	1.37 1.40	
N5474	14 3.26 3.59	53 54.1 -28.4	100.84 60.19	64.3 22.9	.SAS6P.	6	P200V 4.7	S P F S P G	2 2VS	1.65 .030	.03 .022	1.65 1.67	1.35 .05
N5475	14 3.50 3.46	55 58.9 -28.4	103.04 58.44	62.0 22.8	.S..0S/	0S	P048C 1.7			1.35 .038	.54 .035	1.23 1.26	
N5477	14 3.80 3.54	54 42.1 -28.4	101.61 59.49	63.4 22.9	.SAS9..	9	P200C I			1.24 .035	.08 .031	1.22 1.23	
D186													
N5468	14 3.96 5.26	-5 12.8 -28.3	334.87 52.70	126.9 15.6	.SXT6..	6	W100V S 5		2 4 S	1.40 .029	.01 .022	1.40 1.42	
A1404+69	14 4.14 2.13	69 22.5 -28.4	113.50 46.62	47.8 20.9									
MK284													
N5464	14 4.18 5.83	-29 46.8 -28.3	321.86 50.06	150.4 7.0	.IBS9S.	10	P048C 1.4			1.02 .061	.17 .058	.98 1.00	
N5472	14 4.29 5.26	-5 13.3 -28.3	334.99 52.65	126.9 15.7	.SAR2S/	2	W100V 2.5			1.14 .034	.55 .029	1.01 1.04	
N5480	14 4.51 3.73	50 57.7 -28.3	96.87 62.44	67.5 23.3	.SAS5*. S 5 KT.	5* 2*	W060V 2.7	SD *F S F *	3 S 4 S	1.26 .035	.16 .030	1.22 1.24	
N5481	14 4.84 3.73	50 57.5 -28.3	96.78 62.41	67.5 23.4	.LA.-..	-3	P048C			1.24 .049	.08 .049	1.22 1.25	
N5484	14 5.06 3.49	55 16.0 -28.3	101.93 58.92	62.8 23.1	.E.2...	-5	P048C						
N5485	14 5.45 3.48	55 14.2 -28.3	101.81 58.91	62.8 23.1	.LA..P.	-2	W060V S 0*	E1P F2P K	3 S	1.41 .057	.09 .040	1.39 1.42	
N5486	14 5.68 3.48	55 20.3 -28.3	101.87 58.81	62.7 23.1	.SAS9*.	9	P048C 1.9			1.23 .036	.18 .032	1.19 1.20	
N5483	14 7.32 6.28	-43 5.2 -28.0	317.86 17.25	162.9 2.3	.SAS5..	5	S030V 2.7		1	1.49 .079	.04 .049	1.48 1.53	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _g m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _N N A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)	
N5375				.20											53	
N5378				.19											86	
N5380	13.2			.19											85	P
N5365	12.75		14.3	.58											-201	
N5374	13.0		14.4	.23											-39	
	12.37															
N5383	12.7	12.05	13.3	.20	0.44	0.03	0.72	0.07	.57					2253	2354	PT
	12.18	.09	14.5	11.79	.03	.04	.03	.03	-.02					1 2 14	101	
I4351	12.8			.36										2761	2597	
	12.30		14.2											0 1 45	-164	
A1355+29A				.20										11200	11252	
A1355+29B				.20										0 1 100	52	
N5365B				.58										10980	11031	
														0 1 100	51	
															-200	
N5387				.24												
N5394		13.65		.19	0.66	0.12	*	*	.55					3410	-38	P
ZCG = V 48		.13	14.3	13.26	.04	.05	*	*	.04					0 2 21	3496	
N5395	13.0	12.35		.19	0.72	0.05	*	*		.85*	1.00				86	P
I2 77=V 48	12.68	.13	14.0	.63	.04	.05				1 1 0						
A1357-45	13.0			.19											-202	
	12.83		14.3												89	
N5403				.19												
V310																
N5406	13.0			.19											93	
N5398	12.96		14.1	.40												
N5422	12.8		14.0	.23											-172	
	12.65														149	
N5422	13.0		13.8	.27						2.30	.75			7692	7588	
A1358-11	12.60			.25						2 2 4	.75			0 1 270	-104	
N5430	12.8		14.1	.19											161	
	12.78															
A1359+37				.53										2703	2788	
N5408.				.19										0 2 71	85	
N5433				.24										588	396	
N5443				.41	*	*				1.90	1.92			0 2 9	-192	
N5419	12.4	*		.19						2 3 5	1.55			4268	151	
														0 3 25	4095	
N5440				.26											79	
N5426	12.8	12.75	13.5	12.28	0.59	-.05	0.66	0.01	.47				*	2378	2259	PT
V 21	12.65	.08	14.3	12.28	.03	.05	.03	.05	-.14	1.005	.625	1.42*	2.355	0 1 95	-82	
N5427	12.0	12.05	13.8	11.75	0.62	-.09	*	*	.54	1.005	.625	1.42*	2.355	0 1 95	-82	PT
V 21	12.03	.09		.21	.03	.05			-.15	1 0 2	.625	1.01	1.265	1 1 16	2100	
N5448	12.5	12.2	14.4	11.72										1970	130	
	12.12	.15		.29										0 1 50	6443	
A1401+69				.24										6255	188	
														0 1 220		
A1401+11				.19											-13	S
N5444	13.1		14.4	.23	0.46	*	0.54	*	.40	1.85	.75			3954	4034	
N5457	12.51		13.9	.41	.05		.04			6 3 7	1.03			0 2 44	80	
V344	9.0	8.2	15.2	.796	.05		.04			1.87	1.00	2.98	3.97	7 2 4	388	PST
I4366	7.80	.13		.25						7 5 2	1.03*	5.01	1.15	4609	147	
														0 1 50	-172	
A1402-00				.25										7424	7365	
														0 1 20	-59	
A1402+09				.24												
N5473	12.8	12.3	13.8	12.01	0.87	0.53	*	*	.79					2006	-22	
	12.47	.1	13.6	11.09	.03	.06			.49					0 2 38	2156	
N5474	11.7	11.35	14.4	11.09	0.50	*	0.57	-.07	.44			1.67	1.30	270	150	PT
V344	11.26	.13		.24	.04		.03	.05				2.01		2 2 8	416	
N5475				.23											146	
N5477		14.2	15.0	.23	.38	-.39			.31					292	152	
		.15		.23	.06	.07			-.44					0 1 3	441	
N5468	12.4	*	14.1	.26	*	*						1.17		2841	2764	
	12.24			.29								1.01		1 1 10	-77	
A1404+69				.37										9329	9517	
N5464	13.1		12.7	.26										0 1 105	188	
N5472	13.15			.22											-160	
N5480	12.6		13.6	.22										1791	-76	
	12.89			.22										0 1 95	1928	
N5481				.22											137	
N5484				.23										2102	2239	
														0 1 95	137	
N5485	12.9	12.40	14.1	.23	0.91	0.49	*	*	.83					1985	151	
	12.56	.05		.23	.02	.03			.44					0 1 50	2136	P
N5486				.59										1314	1466	
														1 1 19	152	
N5483	12.4		14.3											1820	1628	P
	12.09													0 1 35	-192	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log(D0) Log Do (13)	Log A _g m.e. (14)
A1407-01	14 7.4	-1 0	339.77	122.9						.70	.00	.70	
A1407-71	5.18	-28.1	55.92	17.7						.075	.100		
MK285	14 7.41	71 54.2	114.65	45.1									
N5490	14 7.58	17 46.8	9.15	103.5	.E.2...	-5	P048C			1.42	.08	1.41	
	4.78	-28.1	69.51	22.1			2.3			.047	.042	1.45	
I0982	14 7.61	17 55.9	9.53	103.4	.LA.4...	-2	P200C			1.17	.01	1.17	
I0983	4.77	-28.1	69.58	22.1			3.4		3VS	.041	.042	1.20	
	14 7.70	17 58.2	9.65	103.3	.SBR4...	4	P200C			1.74	.05	1.73	
	4.77	-28.0	69.58	22.2			4.5		3 S	.044	.040	1.75	
N5490C	14 7.74	17 51.0	9.37	103.5	.SBS4...	4	P200C			1.03	.13	1.00	
	4.77	-28.0	69.51	22.2			3.0			.037	.035	1.02	
N5492	14 8.2	19 51	14.64	101.3	.S..3P%	3*	P048C			1.26	.58	1.13	
	4.73	-28.0	70.38	22.6			1.5			.050	.050	1.15	
N5493	14 8.88	-4 48.5	336.96	126.9	.L...P/	-2	W100V			1.30	.15	1.27	
	5.22	-27.9	52.46	16.9			3.3	E7 *K	04	.046	.041	1.30	
N5496	14 9.06	-0 55.4	340.97	123.0	.S..7*/	7*	W060V			1.64	.63	1.49	
	5.18	-27.9	55.76	18.1	S 6	7*	3.0	SI *AF		.031	.025	1.51	
A1409-65	14 9.3	-65 6	311.34	183.1	.SAS3*	3*	S040V			1.50	.41	1.40	
	7.80	-27.8	-3.80	-6.4			2.6			.050	.040	1.63	
N5494	14 9.48	-30 24.8	322.85	151.4	.SAS5...	5	W100V			1.35	.05	1.34	
	5.87	-27.9	29.98	7.8	S 3	3*	3.5			.046	.035	1.37	
A1409+52	14 9.83	52 34.6	97.64	65.6	.SB.S*	5	P048C			1.07	.49	.95	
	3.59	-27.9	60.67	24.0			1.2			.061	.058	.97	
A1410+34	14 10.36	34 46.9	61.05	85.2									
MK467	4.32	-27.9	71.13	24.6									
N5506	14 10.65	-2 58.5	339.16	125.2	.S..1P/	1	PG48C			1.46	.45	1.36	
	5.22	-27.8	53.81	17.9			2.3			.035	.031	1.39	
N5507	14 10.73	-2 54.9	339.24	125.1	.LXR0*	-2	P048C			1.30	.25	1.24	
	5.22	-27.8	53.85	17.9			1.9			.040	.038	1.27	
N5523	14 12.54	25 33.0	32.12	95.3	.SAS6*	6*	W100V	S *F		1.65	.49	1.53	
	4.57	-27.7	71.23	24.4	S 3	4	3.6		1	.032	.026	1.55	
A1413+16	14 13.30	16 47.0	8.80	104.8	.I..9..	10	P048F			1.27	.03	1.27	
D188	4.79	-27.6	67.82	23.3			2.1			.039	.038	1.28	
N5529	14 13.47	36 27.4	65.18	83.4	.S..5*/	9	W060V			1.77	.77	1.59	
	4.25	-27.6	69.98	25.3			2.1			.031	.025	1.61	
A1413+23	14 13.63	23 17.1	25.57	97.8	.I..9..	10	P048N			1.25	.09	1.23	
D187	4.63	-27.6	70.47	24.3	P		2.0			.039	.038	1.24	
N5533	14 14.00	35 34.5	62.63	84.3	.SAT2..	2	P200V	S GK	4	1.51	.18	1.47	
	4.27	-27.6	70.18	25.4	S N		4.3	S K *	4	.033	.028	1.49	
N5532	14 14.43	11 2.3	357.97	111.0	.L.....	-2	P048N			1.28	.00	1.28	0.83
	4.92	-27.5	64.11	22.4			2.1			.071	.071	1.31	.04
N5544	14 14.95	36 48.2	65.80	83.0	RSBT0..	0	P200V			1.04	.01	1.04	
	4.23	-27.5	69.58	25.6			3.5		5	.043	.042	1.06	
N5545	14 14.99	36 48.4	65.81	83.0	.SAS4*	4	P200V			1.10	.42	1.00	
	4.23	-27.5	69.57	25.6			3.2		4 S	.034	.029	1.02	
N5534	14 15.02	-7 11.1	337.17	129.7	PSXS2P*	2	P048C			1.14	.24	1.08	
	4.32	-27.4	49.64	17.6	S T		1.6	I P A *		.056	.048	1.11	
N5530	14 15.30	-43 9.7	319.27	163.6	.SAT4..	4	C060C			1.61	.26	1.55	
	6.34	-27.4	16.70	3.6			3.3			.065	.041	1.61	
N5548	14 15.72	25 22.0	31.97	95.6	PSA50..	0	W100V	S P G *	5	1.28	.06	1.27	0.7
	4.56	-27.4	70.50	25.1	S PNT*		3.3		5	.036	.032	1.30	.1
N5557	14 16.33	36 43.4	65.31	83.1	.E.1...	-5	W060V			1.38	.04	1.38	0.90
A1416-26	14 16.42	-27.4	69.35	25.9	E 1		3.1	E2 *K *	3	.046	.038	1.41	.05
	4.22	-26.6	326.25	148.4	.SAR5..	5	P048C			1.45	.23	1.40	
A1417+09	14 17.3	9 36	356.68	112.7	.I..9..	10	W2.2			1.61	.59	1.47	
	4.94	-27.3	62.62	22.8			2.2			.039	.038	1.48	
N5560	14 17.56	4 13.3	349.26	118.4	.SBS3P.	3	P200V			1.59	.64	1.44	
	5.06	-27.2	58.65	21.5			4.0		4	.032	.026	1.47	
N5556	14 17.64	-29 1.1	325.33	150.9	.SXT7..	7	W100V			1.49	.06	1.48	
D243	5.87	-27.2	29.72	10.0	SX	8*	3.7		1	.033	.028	1.51	
N5566	14 17.82	4 9.7	349.28	118.4	.SBR2..	2	P200V	R *GK*	3	1.81	.43	1.71	1.15
	5.07	-27.2	58.56	21.6	S 4 NT	4*	4.6		5	.030	.024	1.74	.04
N5569	14 18.02	4 12.7	349.42	118.4	.SXT6*	6*	P200C			1.29	.06	1.27	
	5.06	-27.2	58.57	21.7			3.6		2VS	.040	.035	1.29	
N5585	14 18.20	56 57.5	101.01	60.7	.SXS7..	7	P200V	SI *FG	2	1.74	.17	1.70	
	3.22	-27.3	56.48	24.7			4.7		1	.031	.024	1.72	
N5574	14 18.41	3 28.0	348.65	119.2	.LB*-S/	-3*	W100V	D GK	3	1.21	.23	1.15	0.6
	5.08	-27.2	57.93	21.5			3.0		4 S	.037	.030	1.19	.07
N5576	14 18.54	3 29.9	348.74	119.2	.E.3...	-5	W100V	E3 K	3	1.50	.15	1.46	0.83
	5.08	-27.2	57.94	21.6	E 2		3.7		03	.055	.037	1.50	.04
N5577	14 18.70	3 39.9	349.00	119.0	.SAT4*	4	P048C			1.53	.47	1.42	
	5.08	-27.1	58.04	21.7			2.2		3 S	.035	.030	1.44	
N5607	14 18.78	71 48.8	113.49	44.9	.P.....		P048N			1.03	.04	1.02	
MK286	1.35	-27.3	43.89	21.5			1.6			.039	.038	1.05	
N5587	14 19.8	14 9	5.53	108.0	.S..0..	0	P048N			1.46	.45	1.36	
	4.83	-27.1	65.05	24.3			2.0			.039	.038	1.39	
N5584	14 19.83	-0 9.6	345.12	123.0	.SXT6..	6	W100V			1.52	.11	1.50	
	5.16	-27.0	54.86	20.9	S 5	3	3.7	S A		.036	.028	1.52	
A1420+15	14 20.0	15 18	7.86	106.8	.P.....		P048N			.98	.28	.91	
	4.81	-27.0	65.67	24.6			1.3			.042	.045	.94	
A1420+46	14 20.0	46 57	86.68	71.7									
	3.79	-27.1	63.53	26.2									
N5596	14 20.41	37 20.9	66.14	82.4	.L.....	-2	P048N			1.17	.11	1.14	
MK470	4.18	-27.0	68.37	26.7			1.8			.042	.045	1.17	
A1420+45	14 20.62	45 36.7	84.15	73.1	.I..9..	10	P048N			1.40	.09	1.38	
D189	3.84	-27.0	64.28	26.4			2.3			.100	.100	1.39	
A1420+33	14 20.78	33 4.6	54.62	87.2	.SB.1..	1	P048N			1.04	.17	1.00	
MK471	4.32	-27.0	69.43	26.7			1.5			.039	.038	1.02	
N5592	14 21.00	-28 27.7	326.36	150.7	.SXS3S.	3*	P048C			1.22	.14	1.19	
	5.87	-26.9	29.94	10.9	S 3 PT%	1*	1.9			.061	.058	1.23	
N5600	14 21.43	14 51.9	7.46	107.3	.S..5P.	5	W060V	S P F		1.15	.01	1.15	
	4.81	-26.9	65.14	24.9	S 5 T*		2.7		4	.036	.033	1.17	
N5595	14 21.47	-16 29.9	332.78	139.4	.SXT5..	5	W100V			1.31	.22	1.26	
	5.55	-26.9	40.71	15.8	S 5 T		3.2	S A	3 S	.038	.027	1.29	
N5597	14 21.70	-16 32.3	332.82	139.5	.SXS6..	6	W100V			1.31	.06	1.30	
	5.55	-26.9	40.65	15.8	S 3 N		3.4	S AF	SVS	.042	.031	1.32	
N5613	14 21.99	35 7.1	60.06	84.9	RLXR...	-1	P200V			1.05	.06	1.04	
	4.24	-26.9	68.75	27.0			3.5		4 S	.040	.038	1.06	

NGC IC, A MK, DDO (1)	Coordinates				Classification				Diameters				
	RA (1950) IOOP (2)	Dec IOOP (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) -w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D(0) Log D ₀ (12)	Log A _g m.e. (13)
N5614	14 22.02	35 5.1	59.97	84.9	.SAR2P.	2	P200V	S P *G	3	1.43	.07	1.41	0.95
N5605	4.24	-26.9	68.75	27.0	S NT		4.2		4 S	.035	.031	1.43	.06
A1422+26	14 22.41	-12 56.3	335.33	136.0	PSXT5*	5	P048C			1.25	.08	1.23	
	5.46	-26.8	43.74	17.3	S S	1	2.0			.053	.045	1.26	
A1422+44	14 22.44	26 50.9	36.89	94.1						.75	.00	.75	
D190	4.50	-26.9	69.23	26.7	.IA.9..	10	P048N			.075	.100		
A1423+56	14 22.80	44 45.0	82.02	74.1	I	7*	2.2			1.31	.00	1.31	
D191	3.87	-26.8	64.48	26.8	.SBS7..	7	P048N			.050	.050	1.32	
	14 23.85	56 32.7	99.45	61.0	SX	9	2.1			1.34	.14	1.30	
	4.18	-26.8	56.31	25.5						.039	.038	1.32	
N5618	14 24.6	-2 3	344.85	125.4	.SBS7..	5	P048N			1.25	.10	1.22	
N5619	5.21	-26.6	52.63	21.5	.SXT3..	3	2.0			.039	.038	1.24	
N5631	14 24.8	5 1	357.89	118.0	.LAS0..	-2	W060V	E2P		1.39	.24	1.33	
	5.04	-26.6	58.05	23.5	S 0		P048N			.039	.038	1.36	
A1425+36	14 25.0	56 48	99.53	60.7	.S.....		P048N			1.34	.02	1.33	0.70
	3.15	-26.7	56.02	25.6					04	.061	.045	1.36	.07
A1425+13A	14 25.1	36 8	62.24	83.7						1.17	.76	.99	
	4.19	-26.6	67.86	27.6						.039	.038	1.01	
A1425+13B	14 25.4	13 9	5.50	109.4									
	4.85	-26.6	63.36	25.5									
N5633	14 25.4	13 40	6.44	108.8	RSAT3..	3	W100V	S P G	2	1.36	.20	1.31	0.80
	4.83	-26.6	63.66	25.6	S		3.3		3 S	.033	.028	1.33	.03
A1426+27	14 25.62	46 22.1	84.34	72.2	.S...P.		P048N			.70	.25	.64	
N5635	14 26.3	27 29	39.90	93.5						.075	.100		
A1426+36	14 26.3	27 38	39.30	93.3						1.41	.075	1.34	
MK472	4.46	-26.5	68.46	27.6						.039	.038	1.36	
	14 26.93	36 9.8	62.05	83.7									
	4.18	-26.5	67.50	28.0									
N5641	14 27.09	29 2.6	43.16	91.8	PSXR2..	2	P048C			1.43	.23	1.37	
A1427+34	4.41	-26.5	68.37	27.9	SX2	2*	2.2			.037	.035	1.39	
A1427+22	14 27.1	-34 1	325.19	156.3	.SBS7..	7	P048C						
N5636	6.07	-26.4	24.33	9.7	.SXS5..	5*	P048C			1.12	.00	1.12	
N5638	14 27.12	22 3.4	24.93	99.6	.LXR...-	-1	W060V	R F		.061	.058	1.14	
	4.61	-26.4	67.13	27.3	.E1....	-5	W060V	E2 K	3VS	1.27	.13	1.24	
	14 27.13	3 29.3	351.73	119.8	F 1		3.1			.047	.042	1.27	0.90
	5.08	-26.4	56.53	23.7						1.41	.04	1.40	.09
	14 27.15	3 27.3	351.69	119.8						.059	.043	1.44	
A1427+44	5.08	-26.4	56.50	23.6	.SB.9..	9	P048N			1.37	.19	1.32	
D192	14 27.97	44 40.0	80.68	74.1	SB	9	2.1			.046	.045	1.33	
N5653	3.83	-26.4	63.76	27.8	PSAT3..	3	W100V	SD *G	2	1.26	.07	1.24	
N5660	14 28.02	31 26.3	49.61	89.1	S N*	5	3.3	S AF	4	.035	.031	1.26	
N5645	14 28.06	49 50.7	89.57	68.3	.SXT5..	5	W100V			1.45	.04	1.44	
N5646	3.57	-26.4	60.64	27.2	S S K	3	3.7		4 S	.037	.029	1.46	
N5612	14 28.18	7 29.9	357.35	115.6	.SBS7..	7	W060V	BS *F		1.41	.19	1.36	0.90
	4.98	-26.3	59.22	24.9	S S NK	4*	3.0			.039	.032	1.38	.05
	14 28.2	-78 11	308.15	195.7	.LA.-S.	-3S	S030V			1.30	.39	1.21	
	11.88	-26.0	-16.58	-10.6			2.0			.083	.088	1.35	
N5656	14 28.3	35 32	60.27	84.4	.S..2..	2	P048N			1.32	.10	1.30	
I4444	4.19	-26.4	67.40	28.3	.SXT4..	4	S030V			.039	.038	1.32	
A1428+27	14 28.5	-43 12	321.59	164.7			1.8			1.28	.06	1.27	
MK685	6.44	-26.2	15.79	5.8						.091	.058	1.33	
N5667	14 28.9	27 27	38.96	93.6	.S..6*P	6*	P048C			.87	.25	.81	
N5643	14 29.0	-26.3	67.87	28.2						.075	.100		
	2.86	-26.4	102.03	57.4	.SATS..	5	W060V			1.26	.27	1.20	
	14 29.47	-43 57.2	321.45	165.4			3.6		4VS	.050	.050	1.22	
	6.48	-26.1	15.03	5.6						1.66	.05	1.65	
N5673	14 29.47	-43 57.2	321.45	165.4						.037	.024	1.71	
N5673	14 29.79	50 10.8	89.72	67.9	.SR.5S/	5	P048C			1.41	.53	1.29	
N5665	3.53	-26.3	60.22	27.4			1.9			.035	.031	1.31	
N5665A	14 29.96	8 18.0	359.09	114.9	.SXT5P*	5	P200V	S P F	3 S	1.32	.15	1.29	
	4.96	-26.2	59.44	25.5	S S NT *		3.9			.035	.030	1.31	
N5669	14 29.99	8 17.9	359.10	114.9	CE.0.P*	-6	P200C						
N5669	4.96	-26.2	59.43	25.5	.SXT6..	6	W060V	SB *AF		1.61	.11	1.58	
A1430+79	14 30.28	10 6.6	1.94	112.9	S S	5	3.5			.034	.028	1.60	
	4.91	-26.1	60.56	26.0	.S.....		P048N			1.10	.61	.96	
	14 30.4	79 28	117.40	36.9			1.2			.050	.050	1.00	
	-1.93	-26.4	36.81	19.7									
N5672	14 30.50	31 53.4	50.69	88.6	.S..3S/	3S	P048C			1.00	.17	.96	0.50
N5678	4.31	-26.2	67.55	28.7			1.4			.048	.046	.98	.04
I1029	14 30.64	58 8.4	100.05	59.1	.SXT3..	3	W060V	S P F	2	1.51	.28	1.45	
	2.97	-26.2	54.50	26.1	S 5*	3*	3.1		3VS	.034	.026	1.47	
	14 30.72	50 7.6	89.44	67.9	.SA.3S/	3	P048C			1.47	.63	1.32	
N5668	3.53	-26.2	60.14	27.6	.SAST..	7	P200V	SI *F	2	.038	.035	1.34	
N5676	14 30.90	4 40.2	354.44	118.8	S S K	4	4.4			1.52	.03	1.52	
	5.05	-26.1	56.75	24.9	.SAT4..	4	W060V	S F	2	.030	.024	1.54	
	14 31.03	49 40.8	88.69	68.4	S S K	3*	3.3		3 S	1.59	.28	1.53	1.15
	3.55	-26.1	60.38	27.7						.030	.023	1.55	.04
N5682	14 32.98	48 53.4	87.03	69.2	.SBS3..	3	W060V			1.30	.52	1.18	0.80
N5683	3.58	-26.0	60.62	28.1			2.4			.034	.029	1.20	.04
MK474	14 33.11	48 52.9	86.99	69.2	.SBS0S.	0	W060V			.82	.06	.81	0.35
A1433+59	3.58	-25.9	60.61	29.1						.037	.034	.84	.06
D193	14 33.22	59 33.3	101.19	57.4	.SB.8..	8	P048N		5	1.26	.20	1.21	
N5687	2.82	-26.0	53.22	26.1	SX	9	1.9			.039	.038	1.23	
N5689	14 33.29	54 41.6	95.39	62.7	.L..-S.	-3S	W060V	F4 K	3	1.42	.15	1.39	
	3.21	-25.9	56.77	27.2	S 0*		3.1	ED *K	D3	.040	.036	1.42	
	14 33.73	48 57.6	86.99	69.1	.SBS0*.	0	W060V	SD *K	3	1.57	.49	1.45	
	3.57	-25.9	60.48	28.2	S N **		3.0		04	.034	.028	1.48	
A1433+57	14 33.93	57 28.4	98.72	59.7	.I..9..	10	P048F			1.40	.20	1.35	
D194	2.99	-25.9	54.71	26.6			2.2			.100	.100	1.36	
I4448	14 34.2	-78 36	308.26	196.3	.SBS9*.	9*	S030V		1	1.07	.05	1.06	
N5693	12.37	-25.4	-17.09	-10.5	.SBS7..	7	W060V	S F		.183	.112	1.11	
N5690	14 34.42	48 48.2	86.60	69.3			2.9			1.28	.07	1.26	
	3.57	-25.8	60.49	28.4	.S..5S/	5S	W060V	SB *A		.036	.032	1.27	
N5690	14 35.15	2 30.4	353.16	121.4	S 3	4	3.0	S F *	1	1.55	.47	1.43	
N5691	5.10	-25.7	54.45	25.3	.SXS1*P	1	W100V			.034	.028	1.45	
	14 35.33	-0 10.9	350.21	124.3	S N *		3.3	SIP*		1.31	.09	1.29	
	5.16	-25.7	52.42	24.6						.038	.031	1.32	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N _H N _H (24)	α ₊ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
N5614 V 77 N5605	12.9 12.60 13.1 13.15	12.54 .06	12.8 14.4	.19 12.26 .30	0.86 .03	0.42 .04	0.92 .03	0.49 .04	.77 .36						3872 0 1 75	3966 94	PT
A1422+26			14.0	.22						2.10 6 3 4	.37 1.04				10171 0 1 70 154 1 0 7	10234 63 282 128	
A1422+44 12 87 A1423+56				.20 .24								1.07 1 .01				164	
N5618				.28											7145 1 0 10	7098 -47	
N5619				.27													
N5631	12.5 12.40	12.50 .13	11.5 14.0	.24 12.22 .19	*	*	0.95 .05	0.45 .06							1979 0 1 60	2144 165	
A1425+36																	
A1425+13A				.26											7830 0 1 50	7842 12	
A1425+13B				.26											5800 0 1 50	5814 14	
N5633 12 89 A1426+27	12.8 12.83	12.85 .09	12.3 14.0	.21 12.46 .22 15.3 .15	0.55 .04 .22 .06	-.06 .05 -.13 .07	0.63 .03	0.03 .04	.45 -.13						2317 0 2 38 3819 0 1 174	2451 134 3888 69	
N5635				.22													
A1426+36				.20											4495 0 2 71	4596 101	
N5641	13.1 12.90		14.3	.21 .46													75 2858
A1427-34																	
A1427+22		15.1 .15	15.5	.24 .27	.76 .06	.23 .07				2.00* 2 1 1	.54 1.435				3014 0 1 50	-156	
N5636																	49
N5638	12.6 12.21	12.20 .09	12.2 14.1	.27 11.90	0.90 .04	0.48 .06	0.93 .03	0.52 .06	.82 .43						1677 0 1 50	1654 -23	
A1427+44				.20								.81 1 .01			2746 1 0 25 3557 0 1 57	2876 130 3642 85	
N5653	12.9 12.99	12.90 .06	13.9 12.62	.20 12.62 .22	0.7 .1	-.04 .02	*	*	.62 -.10								
N5660	12.3 12.11 12.9 12.74 13.0 13.03	12.3 .15 12.8 .1	14.3 14.2	.22 14.3 .27 14.2 .99	.46 .06 0.48 .05	-.18 .07 -.15 .05											
N5645																	
N5612																	
N5656				.20													
I4444	12.2 12.45		13.5	.65													
A1428+27				.22								.46 1 .01			4470 1 1 16	-179 4541 71	
N5667				.25													
N5643	11.4 11.04	10.705 .14	13.7 9.97	.68 9.97						1.40* 1 1 2	.715 1.02		3.145		1142 0 2 36	962 -180	
N5673				.22													
N5665	12.7 12.79		13.9	.27											2266 0 2 15	149 -2	
N5665A				.27											2188 0 1 22	2186 -2	
N5669	12.5 12.00		14.6	.27 .37								1.31 1 .01			1368 1 0 10	1372 4	
A1430+79																	
N5672		14.25 .13	12.2 13.7	.20 13.89 .24	0.61 .05	-.16 .05	0.67 .05	-.06 .05	.51 -.23						3701 0 1 65 2220 0 1 61	3789 88 2391 171	
N5678	12.1 12.08		13.8	.22													
I1029																	
N5668	12.4 12.03 11.9 11.77	12.15 .13 11.6 .13	14.5 12.8 13.7 11.14	.28 11.84 .22 11.14	0.66 .05 0.67 .04	*		0.77 .03	.58 .55			1.51* 2 .01 .68 1 .01	.955 3.73	1577 2 2 8 2215 1 1 28	1562 -15 2363 148		
N5682			14.45 14.5 15.60 .09	13.9 13.81 12.8 15.17 .25	0.47 .05 0.83 .04	-.14 .05 -.28 .04	0.55 .05 0.86 .04	-.05 .04 -.24 .04	.31 -.26 .66 -.27						2267 0 2 32 11733* 0 2 47 1921 1 0 15 2119 0 1 75 2205 0 1 50	2413 146 11880 147 2097 176 2282 163 2352 147	
A1433+59												.63 1 .01					
N5687	12.7 12.35	12.6 .15	14.2 12.31	.23 12.31 .21	.85 .06 .94				.77 .79								
N5689	12.6 12.44	12.8 .15	14.3 12.21	.21 12.21													
A1433+57				.24								.72 1 .01			223 1 0 10	394 171	
I4448				.95													
N5693				.21													
N5690	12.9 12.74 13.0 12.95	12.5 .15 *	13.9	.28													
N5691			14.1	.29	*	*											

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log Do (12)	Log Ae m.e. (13)	
N5707	14 35.84 3.38	51 46.7 -25.7	90.90 58.45	65.9 28.1	.S..2*/	2*	P048C 1.8			1.44 .038	.63 .037	1.30 1.32		
A1436-08 D195	14 36.23 5.37	-8 24.9 -25.6	342.77 45.77	132.9 22.1	.I..9..	10	P048F 1.7			1.40 .061	.65 .058	1.25 1.27		
N5701	14 36.69 5.02	5 34.8 -25.6	357.46 56.37	118.3 26.5	RSBT0..	0	W100V 4.1	R K		1.67 .032	.02 .026	1.66 1.69	1.20 .06	
A1437+37 MK475	14 37.05 4.09	37 1.1 -25.6	62.75 65.31	82.7 30.0										
N5705	14 37.26 5.17	-0 30.3 -25.5	350.46 51.86	124.8 24.9	.SBT7..	7	P048C 2.3			1.45 .036	.17 .032	1.41 1.43		
N5713	14 37.63 5.16	-0 4.5 -25.5	351.03 52.12	124.4 25.2	.SXT4P.	4	P200V 4.3	SI *A SIP*	4 5	1.45 .031	.05 .024	1.44 1.47	*	
N5716	14 38.31 5.60	-17 15.8 -25.4	336.85 38.07	141.8 19.2	.SBT5..	55	W100V 3.2			1.27 .051	.10 .041	1.25 1.28		
N5719	14 38.38 5.16	-0 6.2 -25.4	351.23 51.98	124.5 25.3	.SXS2P.	2	P200V 4.1		4	1.53 .036	.40 .028	1.44 1.47		
A1439+53 MK477	14 39.05 3.22	53 42.9 -25.4	93.04 56.82	63.6 28.2	.S....*P		P048C							
N5729	14 39.3 5.38	-8 50 -25.3	343.31 44.99	133.6 22.7						1.47 .075	.54 .100	1.35		
N5728	14 39.61 5.60	-17 2.4 -25.3	337.33 38.10	141.7 19.6	.SXR1*.	1*	W100V 3.5			1.45 .046	.24 .035	1.39 1.43		
N5733	14 40.21 5.16	-0 8.3 -25.2	351.75 51.65	124.7 25.8	.S..3S/	3S	P048C 1.4	D *FG	4	1.11 .056	.40 .048	1.02 1.05		
I1048	14 40.4 5.03	5 6 -25.2	357.96 55.36	119.0 27.3	.S.....		P048N 1.9			1.40 .039	.44 .038	1.29 1.32		
N5739	14 40.57 3.86	42 3.2 -25.2	73.12 62.99	76.8 30.3	.LXR*..	-1	P048C S N			1.35 .051	.03 .053	1.35 1.38		
N5740	14 41.87 5.11	1 53.4 -25.1	354.50 52.85	122.6 26.7	.SXT3..	3	W060V S 4	S F	4	1.49 .029	.25 .021	1.43 1.46	1.05 .05	
N5746	14 42.39 5.10	2 9.9 -25.0	354.97 52.96	122.4 26.9	.SXT3S/	3	P200V 4.6	S GK S GK	2 3VS	1.90 .024	.66 .017	1.74 1.77	1.35 .05	
A1442-08 D196	14 42.90 4.95	8 4.3 -25.0	2.71 56.86	116.0 28.6	.SB.9..	9	P048N 2.5			1.47 .050	.00 .050	1.47 1.49		
A1443+08A	14 43.58 4.93	8 42.4 -24.9	3.81 57.12	115.3 28.9	.IB.9SP	10	L120C 2.1			.66 .050	.18 .050	.62 .63		
A1443+08B	14 43.61 4.93	8 42.2 -24.9	3.81 57.12	115.3 28.9	.SB.6SP	6	L120C 2.6			1.10 .050	.54 .050	.98 1.00		
N5750	14 43.62 5.16	-0 0.8 -24.9	352.89 51.17	124.8 26.6	.SBRO..	0	W100V S 4	DS *G *	5 S	1.46 .037	.22 .029	1.41 1.45		
A1443+08C	14 43.62 4.93	8 43.3 -24.9	3.84 57.12	115.3 28.9	.LB...SP	-2	P048C .6			.67 .042	.33 .045	.59 .63		
I1055	14 44.7 5.51	-13 31 -24.8	341.14 40.39	138.8 22.1						1.42 .075	.43 .100	1.32		
N5756	14 44.80 5.55	-14 38.7 -24.8	340.34 39.44	139.9 21.7	.SXS3S/	3	P048C 1.9			1.31 .048	.29 .041	1.24 1.27		
N5757	14 44.95 5.67	-18 52.2 -24.7	337.47 35.87	144.1 20.0	RSBR3..	3	W060V SB3 N	R F	5	1.32 .049	.05 .039	1.31 1.35		
A1446-09 D197	14 46.85 5.42	-9 57.4 -24.6	344.48 42.98	135.5 24.0	.IBS9P.	10	P200C 3.9			1.47 .061	.18 .058	1.43 1.45		
I1065	14 48.26 2.19	63 28.5 -24.6	103.19 49.09	52.7 26.7	.LB....	-2	P048N 1.7			1.11 .042	.08 .045	1.09 1.13	0.60 .04	
A1448+07A	14 48.9 4.97	7 0 -24.4	2.91 55.03	117.6 29.8										
A1448+07B	14 48.9 4.97	7 0 -24.4	2.91 55.03	117.6 29.8										
A1448+35	14 48.9 4.08	35 47 -24.4	58.78 63.25	83.9 32.5	.P.....		P048N 1.0			.92 .039	.42 .038	.82 .84	*	
A1449+35	14 49.2 4.08	35 45 -24.4	58.69 63.20	84.0 32.5	.P.....		P048N 1.7			1.07 .039	.04 .038	1.06 1.08	0.65 .03	
N5768	14 49.55 5.22	-2 19.7 -24.3	352.16 48.46	127.8 27.3	.SAT5*.	5*	W100V I 9	SI *AF	3 S	1.30 .034	.10 .029	1.27 1.30		
N5772	14 49.74 3.86	40 48.2 -24.4	69.26 61.84	78.0 32.2	.SAR3*.	3*	W060V 2.9		4	1.37 .037	.18 .035	1.32 1.34		
N5777	14 50.0 2.65	59 10 -24.4	98.20 52.02	57.2 28.2	.S..3..	3	P048N 1.8			1.52 .039	.77 .038	1.34 1.36		
A1450-19	14 50.3 5.70	-19 33 -24.2	338.33 34.62	145.3 20.8						1.34 .075	.74 .100	1.17		
I1067	14 50.57 5.06	3 32.2 -24.2	358.94 52.44	121.5 29.3	.SB53..	3	W060V 3.0		3 S	1.36 .038	.07 .035	1.34 1.37		
A1450+74 MK288	14 50.84 -0.03	74 1.7 -24.4	112.39 40.77	41.8 22.9						.90 .075	.34 .100	.82		
N5774	14 51.20 5.06	3 47.1 -24.2	359.42 52.49	121.3 29.5	.SXT7..	7	W060V 3.3	S F	1	1.50 .035	.07 .027	1.48 1.50		
N5775	14 51.45 5.06	3 44.8 -24.1	359.44 52.42	121.4 29.6	.SB.5S/	5*	W060V 3.1	S *FG*	1	1.63 .032	.55 .024	1.50 1.53		
N5783	14 51.87 3.20	52 16.7 -24.2	88.83 56.20	64.7 30.4	.SXS5..	5	P048C 2.3			1.47 .039	.18 .038	1.43 1.45		
I1076 MK479	14 52.68 4.65	18 14.3 -24.0	21.75 60.16	104.8 32.8						1.09 .042	.22 .045	1.04		
A1452+42	14 52.8 3.77	42 13 -24.1	71.63 60.82	76.3 32.5										
N5787	14 53.4 3.75	42 42 -24.0	72.47 60.55	75.7 32.6						1.08 .042	.15 .045	1.05		
A1455-06	14 55.8 5.34	-6 35 -23.7	349.78 44.24	132.9 27.3	.SBT5*.	5	PG48C 2.3			1.22 .061	.03 .058	1.22 1.25		
N5792	14 55.80 5.18	-0 53.4 -23.7	355.36 48.43	126.8 29.2	.SBT3..	3	W100V 4.0		3VS	1.86 .031	.53 .027	1.74 1.77		
N5791	14 55.93 5.70	-19 4.1 -23.6	339.99 34.29	145.5 22.2	.E.6..*	-5*	W060V 2.9	S F ED *K	03	1.38 .141	.22 .073	1.33 1.39		
N5796	14 56.61 5.62	-16 25.5 -23.6	342.02 36.36	143.0 23.5	.E.0..*	-5	W100V 3.3			1.29 .129	.07 .066	1.27 1.33		
N5793	14 56.62 5.62	-16 29.7 -23.6	341.97 36.30	143.0 23.5	.S..3*/	3*	W100V 2.9	E2 K	03	1.24 .053	.46 .043	1.15 1.19		
A1456+53	14 56.8 3.07	53 26 -23.7	89.73 54.93	63.2 30.8						.79 .075	.00 .100	.79		
N5820	14 57.18 3.02	54 5.1 -23.7	90.60 54.50	62.5 30.7	.L....*/	-2	W060V 3.1	F7 K	3VS	1.40 .071	.04 .071	1.39 1.42	0.80 .05	
N5806	14 57.47 5.10	2 5.4 -23.5	359.10 50.19	123.7 30.5	.SXS3..	3	W100V S 4	SD *G SD *G	3 5	1.49 .032	.26 .027	1.43 1.46		

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' _g m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₄ α ₅ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	ΔV ΔV (29)		
N5707				.22												156	
A1436-08				.31								.79			1827	1766	
N5701	12.8	11.8	13.3	.28	*	*	*	*				1.06			1 0 15	-61	
A1437+37	11.93	.13	14.9	.20											550	661	
N5705				.29											0 1 100	111	
N5713	11.8	12.00		.29	0.62	0.00	*	*	.53	1.48*	-.145	1.56	1.255		1875	1847	P
N5716	11.79	.08	14.0	.35	.03	.04			-.06	1 1 2	.97	1.01	1.00		3 3 7	-28	
N5719				.29												-92	
A1439+53		*		.23	*	*	*	*							11395	11558	
12 92				.32											0 2 75	163	
N5729																-60	
N5728	12.4	12.1		.35	.76					.905	.655						
N5733	12.39	.15	13.6	.30	.06					1 0 1	.655					-90	
11048				.29												-26	
N5739	13.1			.20												-6	
N5740	12.75		14.3	.29	0.69	0.12	0.75	0.21								130	T
	12.8	12.60	13.3		.03	.05	.06	.05								-17	
N5746	12.57	.07	14.3														
N5746	11.8	11.40	13.6	.29	0.95	*	1.04	0.56	.75						1801	1786	PT
A1442+08	11.32	.09	14.1	10.57	.04		.03	.05							0 3 33	-15	
A1443+08A				.28								.66			1692	1699	
V109				.28								1.01			1 0 5	7	
A1443+08B				.28											10519	10529	
V109															0 1 72	10	
N5750	12.6	12.5	14.1	.30	.88	.35										10	
	12.47	.15			.06	.07										-23	
A1443+08C				.28													
V109				.34												10	
11055				.35												-73	
N5756	13.1		13.9	.37	*											-77	
N5757	13.23	*	13.9	.33												-93	
A1446-09	12.6											1.15			1863	1805	P
V140	12.62											2.01			2 1 16	-58	
11065	14.30	12.8	14.5	.27	0.88	0.29	0.90	0.33	.69	2.47	.75		-3.38		12314*	12505	
A1448+07A	.13			.29	.05	.06	.03	.03	.29	5 4 2	.93				0 2 39	191	
A1448+07B	*			.29	*	*										8	
A1448+35	14.75			.20	0.25	-.75	*	*	.11			.68			1147	1262	
22 70=V324	.08	13.1	14.21	.20	.05	.03			-.85			2.02	.63		1 3 9	115	
A1449+35	14.30	13.0	14.0	.20	0.44	-.15	0.50	*	.38			.79			1226	1341	
22 71=V324	.08	14.4	14.06	.32	.03	.04	.03		-.19			2.01	.53		1 2 24	115	
N5768	12.9		14.0	.20												-27	
N5772	12.94			.25												132	
N5777				.38												182	
A1450-19				.30												-91	
11067				.33												-3	
A1450+74				.30	.62				.53						7445	7655	
N5774	12.82	15.0	12.46	.62	.07							1.77			0 1 220	210	
N5775	12.4	12.24	13.9	.30	.82				.64	1.345	.695	1.01	-.32		1589*	1580	T
N5783	12.28	.11	11.49	.22	.07					1 0 1	.695		1.765		1 1 20	-1	T
															1582	1581	
N5783				.26											0 1 95	-1	
11076															6190	166	
															0 1 100	6245	
A1452+42				.20											2530	2668	
12 97				.20											0 1 105	138	
N5787				.34											5485	5625	
12 98				.32											0 1 105	140	
A1455-06				.32											7596	7558	
N5792	12.9*		14.5	.32	*	*									1 1 14	-38	
N5791	11.72	*	14.0	.39	*										1990	1974	
	13.0														0 1 34	-16	
	12.63															-84	
N5796	12.8	*	13.9	.38	*	*											
N5793	12.65			.38	1.11	.49				2.02	.055					-74	
		14.3	14.3	.23	.06	.07				1 4 1	.625						
A1456+53															9300	-74	
12 99				.23											0 1 105	9472	
N5820	12.8	12.85	12.3	.23	0.96	0.43	0.98	0.50	.87						3269	3443	P
	12.47	.13	14.6	12.55	.04	.06	.03	.03	.39						0 1 60	174	
N5806	12.5	12.3	13.9	11.76	.70				.57						1301	1298	
	12.38	.15			.06										0 1 65	-3	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D25 m.e. (10)	Log R25 m.e. (11)	Log D10 Log Do (12)	Log Ae m.e. (13)
N5832	14 57.56 .46	71 52.7 -23.7	110.11 42.16	43.7 24.3	.SBT3S.	3S	W060V 3.4		1	1.60 .042	.19 .037	1.55 1.58	
N5811	14 57.92 5.11	1 49.2 -23.5	358.91 49.93	124.0 30.6	.SBS9+.	9+	W100V 2.7			.98 .054	.04 .048	.97 .99	
N5812	14 58.29 5.36	-7 15.5 -23.4	349.81 43.32	133.9 27.6	.E.0...	-5	W100V 3.5	F1 K E2 K	3	1.38 .066	.03 .11	1.37 1.54	
N5813	14 58.65 5.11	1 53.9 -23.4	359.19 49.85	124.0 30.8	.E.1...	-5	W100V 3.8	DE GK		1.56 .052	.11 .035	1.59 1.12	1.17 .03
N5827	14 59.6 4.38	26 10 -23.3	38.17 60.91	95.4 35.0	.S...2P*	2	P048N 1.7			1.14 .039	.11 .038	1.12 1.15	
A1459+52 D198	14 59.68 3.09	52 47.5 -23.4	88.39 54.93	63.8 31.4	.I...9..	10	P048F 1.9			1.23 .046	.10 .045	1.21 1.22	
N5829	15 0.49 4.47	23 31.7 -23.2	33.01 60.16	98.7 35.1	.SAS5..	5	P200C 3.6			1.29 .038	.05 .038	1.28 1.30	
N5831	15 1.57 5.12	1 24.9 -23.1	359.40 48.98	124.8 31.3	.E.3...	-5	W060V 3.0	F3 K F3 K	3	1.34 .063	.04 .049	1.33 1.38	0.95 .03
I1090	15 1.9 3.68	42 53 -23.1	71.75 59.02	75.1 34.1	E P					.58 .075	.06 .100	.57 1.00	
N5838	15 2.90 5.09	2 17.6 -23.0	123.9 49.32	123.9 31.9	.LA...-	-3	W060V 3.2	D GK D K	3 D3	1.62 .037	.42 .031	1.52 1.57	0.97 .04
N5839	15 2.92 5.11	1 49.7 -23.0	.21 49.01	124.5 31.8	.LA.0S.	-2	P048C 1.9			1.16 .069	.00 .065	1.16 1.20	
N5845	15 3.47 5.11	1 49.6 -22.9	.35 48.91	124.5 31.9	.E.3...	-5	P048C 1.2			.93 .041	.19 .043	.89 .94	
N5846A	15 3.94 5.11	1 47.2 -22.8	124.6 48.79	124.6 32.0	CE.2...	-6	P200V 2.8		3	.70 .049	.04 .047	.75 1.03	0.30 .05
N5846	15 3.94 5.11	1 47.8 -22.8	.43 48.80	124.6 32.0	.E.0...	-5	P200V 4.5	E1 K E2 K	3 D3	1.53 .051	.02 .030	1.53 1.58	1.20 .03
N5850	15 4.59 5.11	1 44.2 -22.8	.52 48.64	124.7 32.1	.SBR3..	3	P200V 4.6	B G R G	2 4	1.63 .031	.04 .024	1.63 1.66	1.38 .02
N5860. MK480	15 4.74 3.67	42 50.0 -22.8	71.33 58.54	75.1 36.6						.98 .042	.00 .045	.98 1.64	
N5866	15 5.12 2.78	55 57.3 -22.8	92.04 52.49	60.0 31.2	.LA.../ E 6P	-1	P200V 4.5	SDP*K D P K	2 4	1.72 .040	.35 .023	1.67 1.09	1.02 .05
N5857	15 5.19 4.58	19 47.3 -22.7	26.70 57.99	103.4 35.9	.SBS3..	3	W060V 2.4		4VS	1.15 .035	.26 .031	1.12 1.31	
N5854	15 5.27 5.08	2 45.6 -22.7	1.87 49.18	123.6 32.6	.LBS.../ S 0*	-1	W100V 3.2	RD *GK	3 D2VS	1.43 .037	.13 .030	1.31 1.35	0.75 .07
N5859	15 5.31 4.58	19 46.4 -22.7	26.69 57.96	103.4 35.9	.SBS4..	4	W060V 2.8		4VS	1.47 .033	.42 .029	1.36 1.38	
I1091	15 5.52 5.47	-10 57.1 -22.7	348.44 39.35	138.5 27.8	.SHS3S.	3	W100V 2.9		3 S	1.13 .055	.16 .047	1.09 1.13	
I1099	15 5.58 2.71	56 42.0 -22.8	92.97 52.09	59.1 31.0	.SXR4..	4	P048C 1.2			1.15 .039	.07 .038	1.13 1.15	
N5858	15 6.10 5.48	-11 1.1 -22.6	348.52 39.21	138.6 27.9	.E.6..*	-5	W100V 2.8			1.14 .158	.33 .079	1.08 1.12	
N5874	15 6.45 2.86	54 56.6 -22.7	90.49 52.91	61.0 31.7	.SXT4..	4	P048C 2.2			1.40 .039	.14 .038	1.37 1.39	
N5861	15 6.55 5.48	-11 8.0 -22.5	348.53 39.05	138.8 28.0	.SXT5..	5	W100V 3.5		1	1.48 .041	.23 .030	1.43 1.46	
N5864	15 7.04 5.07	3 14.6 -22.5	2.87 49.15	123.2 33.2	.LBS0S/ E 7P	-2	W100V 3.2	RD *GK		1.45 .037	.46 .030	1.34 1.38	
N5875	15 7.72 3.03	52 43.1 -22.6	87.17 53.94	63.4 32.6	.SA.3*.	3	P048C 2.1		D3 S	1.42 .037	.27 .034	1.35 1.37	
N5876	15 8.10 2.87	54 41.6 -22.5	89.93 52.85	61.2 32.0	.SBR2*.	2	P048C 2.1			1.42 .039	.28 .038	1.36 1.39	
A1508+67 D199	15 8.28 1.28	67 23.0 -22.6	104.98 44.84	47.7 27.1	.E.4...	-5	P048N 4.4			1.21 .050	.19 .050	2.46 2.50	
N5879	15 8.49 2.64	57 11.4 -22.5	93.24 51.39	58.4 31.2	.SAT4*5 S 3	4*	W060V 3.2	S G	3 3VS	1.64 .033	.42 .027	1.54 1.56	1.10 .05
N5866B	15 10.77 2.73	55 58.4 -22.2	91.34 51.83	59.6 31.9	.SXT7*.	7	P048C 2.5			1.39 .046	.13 .045	1.37 1.39	
N5878	15 10.99 5.58	-14 5.1 -22.1	347.19 36.05	142.3 27.7	.SAS3..	3	W100V 3.6	SD G	3 D3	1.54 .032	.32 .026	1.47 1.51	
A1511-15	15 11.01 5.61	-15 16.7 -22.1	346.27 35.17	143.5 27.1	.SAS7..	7	W100V 3.7	S A *		1.50 .050	.07 .040	1.48 1.51	
N5888	15 11.29 3.70	41 27.1 -22.1	68.17 57.77	76.4 36.1	.SBS4..	4	P048C 1.7			1.18 .037	.20 .035	1.13 1.15	
N5889	15 11.43 3.70	41 30.8 -22.1	68.27 57.73	76.4 36.1	.SB.3S.	3	P048C .9			.94 .050	.54 .050	.81 .83	
N5893	15 11.75 3.66	42 8.7 -22.1	69.38 57.51	75.6 36.0	.SBR3..	3	P048C 1.9			1.16 .036	.04 .033	1.15 1.17	
N5885	15 12.36 5.45	-9 54.0 -21.9	350.96 39.04	138.2 29.8	.SXR5..	5	W100V 3.9	S A	3 S	1.55 .037	.05 .029	1.54 1.57	
N5899	15 13.24 3.65	42 14.0 -21.9	69.41 57.27	75.4 36.3	.SXT5..	5	W060V 3.0	S F	3*	1.48 .034	.36 .029	1.40 1.42	
N5900	15 13.27 3.64	42 23.7 -21.9	69.69 57.17	75.2 36.2	.S...3P/ S 3	1*	P048C 1.6		4 S	1.21 .037	.43 .034	1.11 1.13	
A1513+10	15 13.8 4.84	10 42 -21.8	13.99 52.13	114.9 36.6	.SB.9P*	9*	P048N 2.1			1.47 .039	.46 .038	1.37 1.39	
N5905	15 14.05 2.72	55 42.1 -21.9	90.57 51.59	59.7 32.4	.SBR3..	3	W060V 3.5	RS *F		1.62 .031	.10 .025	1.59 1.61	
A1514+43	15 14.2 3.58	43 20 -21.8	71.26 56.75	74.0 36.2	SX3	1*				1.25 .075	.64 .100	1.10 1.10	
A1514+07	15 14.28 4.95	7 12.3 -21.7	9.42 50.12	119.1 35.9	.E.5...	-5	P048N 1.9			1.32 .071	.29 .071	1.26 1.31	0.90 .05
N5907	15 14.61 2.64	56 30.4 -21.8	91.58 51.09	58.8 32.2	.SAS5*/ S 4	5*	P200V 4.8	S G S G *	2	2.09 .024	.84 .016	1.89 1.91	1.50 .05
N5898	15 15.29 5.91	-23 55.0 -21.6	340.98 27.72	152.4 23.8	.E.0...	-5	W100V 3.3	DE K		1.24 .061	.02 .046	1.24 1.31	0.80 .06
N5908	15 15.38 2.72	55 35.5 -21.7	90.26 51.49	59.8 32.7	.SAS3*/ S 2	3	W060V 3.0	S G S GK	3VS	1.51 .032	.41 .026	1.41 1.43	
A1515-23	15 15.65 5.91	-23 56.4 -21.5	341.04 27.66	152.5 23.9		-5				.75 .075	.16 .100	.71 1.00	
N5903	15 15.67 5.91	-23 53.2 -21.5	341.08 27.70	152.5 23.9	.E.2...	-5	W100V 2.3	DE K		1.30 .060	.06 .044	1.28 1.36	0.95 .05
A1516+42.	15 16.32 3.59	42 55.6 -21.6	70.35 56.49	74.4 36.7	.L...5P	-2S	M082C 2.3			.19 .075	.91 .100	.91 .94	
A1517-36	15 17.5 6.43	-36 45 -21.3	333.38 16.97	164.1 17.1	.SBS4*.	4	P048C						

NGC, IC, A Zw, VV (14)	Magnitudes				Color indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	V ₀ ΔV (29)	
N5832				.32										413	621	
N5811				.32										0 1 30	208	
N5812	12.5	12.2		.34	.97				.87					2066	-3	
N5813	12.21	.15	14.0	11.83	.06									0 1 50	2028	
N5813	12.2	11.65	13.0	.32	1.00	0.57	1.01	0.61	.91	1.48*	.36*		1.615	1882	-38	
N5827	11.64	.04	14.2	11.30	.02	.03	.02	.02	.50	3 1 3	1.96*			0 1 65	1880	
				.24						1 0 0					-2	
															90	
A1459+52				.23									.62	2423	2595	
N5829				.25								1 .01		1 0 10	172	
V 7														5683	5764	P
N5831	12.7	12.45	12.7	.32	0.98	0.57	1.00	0.61	.89					1 1 9	81	
	12.44	.04	14.0	12.10	.02	.03	.02	.02	.50					1684	1682	
I1090				.20										0 1 50	-2	
I2101														4865	5011	
N5838	12.1	11.80	12.1	.32	0.97	0.54	1.00	0.58	.86					0 1 105	146	
	11.72	.05	13.7	11.37	.02	.03	.02	.02	.45					1427	1429	
														0 1 50	2	
N5839		13.6		.33												
		.15	14.3												0	
N5845		13.1		.33	.85											
		.15	12.3		.06										1	
N5846A		14.2		.33	1.00				.90					2267	2268	
		.1	12.7	13.84	.03		1.02							0 2 33	1	
N5846	11.6	11.25	12.7	.33	1.02	0.62	1.04	0.66	.93					1713	1714	T
	11.24	.05	13.8	10.89	.02	.06	.01	.02	.55					0 2 37	1	
N5850	12.9	11.75	14.1	.33	0.80	0.25	0.92	0.42	.70					2353	2354	PT
	12.07	.04	14.6	11.37	.02	.04	.02	.02	.17					0 2 40	1	
N5860.				.21										5365	5513	
I2102														0 1 220	148	
N5866	11.5	10.85	11.4	.24	0.85	0.40	0.92	0.48	.74					692*	674	PT
	11.16	.08	13.4	10.39	.03	.04	.02	.03	.31					0 6 14	182	
N5857		13.8		.27	.70				.56					4706	4777	PS
		.15	13.7	13.29	.06									0 2 57	71	
N5854	12.7	12.65	11.9	.33	0.86	0.30	0.89	0.34	.70					1626	1632	
	12.73	.09	13.4	11.99	.04	.06	.05	.06	.18					0 1 65	6	
N5859		13.25		.27	.83				.65					4664	4735	P
		.09	14.3	12.58	.04									0 1 150	71	
I1091				.37												
															-46	
I1099				.24												S
N5858				.38											184	
N5874				.24											-46	
														3129	3309	
N5861	12.4	*		.38	*	*				1.94*	-.265	1.14		1 0 15	180	
	12.31		14.0							1 1 3	.61*	1 .01		1851	1805	S
N5864	12.8	*		.33	*	*	*	*						1 0 30	-46	
N5875	12.71		13.7	.23										1623	1632	
														0 1 33	9	
N5876				.24											176	
A1504+67				.29											181	
N5879	12.1	12.1	13.1	.25	0.60	0.04	0.69	0.13	.46			1.06		1 833	205	
	11.93	.2	14.1	11.51	.03	.05	.06	.05	-.06			1 .02	2.385	1 1 46	1019	S
N5866B				.24											186	
N5878	12.9	12.3		.40	0.80	*	*	*	.64					2111	185	
	12.58	.13	14.0	11.63	.05									0 1 65	2058	
A1511-15	12.8			.41											-53	
	12.41		14.6												-58	
N5888				.21											148	
N5889				.21											148	
N5893				.21											150	
N5885	12.4	12.2		.38	.52	-.09									-36	
	11.96	.15	14.7		.06	.07									2701	
N5899	12.4	12.6		.21	0.80	0.22	*	*	.67			.97		2549	2701	
	12.44	.1	13.9	12.09	.03	.03			.11			1 .02	2.03	0 1 50	152	
N5900				.21											152	
A1513+10				.31											44	
N5905	13.1			.24										3200	3386	S
	12.33		15.0											0 1 45	186	
A1514+43				.21										5460	5615	
22 73														0 1 185	155	
A1514+07		14.00	14.0	.32	1.10		1.10	.93		2.74	1.09		-3.77	10506	10537	
		.08	14.9	13.52	.05		.05			10 7 4	1.40			0 2 71	31	
N5907	11.8	11.0	14.0	.24	0.77	*	0.85	0.33	.56	1.41	.77*	1.90	2.98	592*	780	PST
	11.06	.1	14.2	10.08	.04		.03	.04		2 3 1	1.635	1 .10	1.51	1 2 35	108	
N5898	12.6	12.60	12.1	.48	1.08	*	1.11	0.51	.95					2214	2128	T
	12.57	.08	13.7	12.09	.05		.04	.06						0 2 38	-86	
N5908	13.0	12.9		.24	.96	.34										
	12.81	.15	14.3		.06	.07									186	
A1515-23		14.6		.49	1.06	.57			.93					2340	2254	T
		.15	12.9	.49	.06	.07			.47					0 1 49	-86	
N5903	12.9	12.50	12.7	.49	1.02	*	1.02	0.55	.89					2468	2382	T
	12.69	.07	13.8	11.97	.03			.06						0 2 37	-86	
A1516+42.				.21										12043	12198	
I2107														0 2 38	155	
A1517-36				.70										0 1 50	2941	
															-128	

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log(D0) Log Do (13)	Log Ae m.e. (14)	
N5916A	15 18.48	-12 55.5	349.83	142.1	.SB5SP.	5	P200V			1.13	.46	1.02		
	5.55	-21.2	35.79	29.8			3.2			.049	.043	1.05		
N5915	15 18.80	-12 54.9	349.91	142.1	.SB52P.	2	P200V			1.21	.13	1.18		
	5.55	-21.2	35.74	29.9	S 4 T		3.7			.035	.030	1.22		
N5916	15 18.87	-12 59.6	349.86	142.2	.SBTIP.	1	P200V	1SP*		1.46	.45	1.36		
	5.55	-21.2	35.67	29.9			3.9			.034	.028	1.41		
N5920	15 19.4	7 53	11.40	118.7	.L.....	-2	P048N		4VS	1.14	.08	1.12	0.89	
	4.92	-21.2	49.45	37.3			1.8			.071	.071	1.16		
N5923	15 19.4	41 54	68.31	75.5	.SX54...	4	P048N			1.31	.00	1.31	.04	
	3.63	-21.2	56.19	37.4			2.2			.039	.038	1.33		
N5921	15 19.46	5 14.9	8.13	121.9	.SBR4...	4	W100V	RS *FG	45	1.69	.07	1.67	1.33	
	5.00	-21.2	47.94	36.7	SX4	2	4.1	SX F	5	.030	.024	1.70	.02	
A1520+29	15 20.7	29 57	46.99	90.6	.S...1..	1	P048N			.99	.10	.96		
	4.17	-21.1	56.78	39.5			1.5			.039	.038	.99		
A1522+58	15 22.6	58 14	92.94	56.4	.SX55...	5	P048N			1.31	.02	1.31		
	2.39	-21.0	49.25	32.5			2.2			.039	.038	1.33		
A1523+16	15 23.7	16 30	24.25	108.1	.SX...5.	5	P048N			1.11	.06	1.10		
	4.64	-20.7	52.68	39.9			1.8			.039	.038	1.13		
N5929	15 24.31	41 50.7	67.86	75.3	.S...2*P	2*	P200C			1.04	.02	1.04		
	3.61	-20.7	55.31	38.3			3.2			.039	.038	1.06		
N5930	15 24.34	41 51.0	67.86	75.3	.SXT3P.	3	P200C			1.30	.30	1.23		
	3.61	-20.7	55.30	38.4			3.4			.039	.038	1.25		
A1526+55	15 26.78	55 42.8	89.14	58.9						.93	.20	.89		
MK482	15 26.1	-20.5	50.04	34.1						.075	.100			
N5949	15 27.32	64 56.0	100.58	49.2	.SAR4S.	4	P200V	SI *AF	1	1.38	.30	1.31		
	2.45	-20.45	44.97	29.9	S		3.9		3VS	.033	.028	1.34		
N5936	15 27.66	13 9.6	20.07	112.6	.SBT3...	3	W060V	S AF		1.19	.03	1.18	*	
	4.75	-20.2	50.38	40.4	S 5	1*	2.7	S F		.035	.031	1.21		
A1530+51	15 30.36	51 56.0	83.42	62.9										
MK485	2.91	-20.0	51.22	36.1										
A1531+46	15 31.3	46 37	75.21	69.0	.P.....		P048N			1.14	.43	1.04		
	3.28	-19.9	52.92	38.2			1.4			.039	.038	1.06		
N5951	15 31.40	15 10.5	23.53	110.1	.SB.S*/	5	P048C			1.54	.56	1.41		
	4.68	-19.8	50.45	41.6			2.1			.034	.032	1.44		
N5953	15 32.22	15 21.6	23.93	109.9	.SA.1*P	1	P200C			1.30	.08	1.28		
	4.67	-19.7	50.35	41.8			3.6			.042	.039	1.32		
N5954	15 32.26	15 22.0	23.94	109.9	.SXT6*P	6	P200C			1.11	.29	1.05		
	4.67	-19.7	50.34	41.8			3.0			.037	.034	1.07		
N5963	15 32.3	56 45	89.99	57.4	.S...P.		P048N			1.55	.10	1.52		
	2.46	-19.8	48.87	34.3			2.6			.039	.038	1.55		
N5965	15 32.8	56 52	90.09	57.2	.S...3..	3	P048N			1.73	.76	1.55		
	2.44	-19.8	48.75	34.3			2.3			.039	.038	1.57		
N5957	15 33.02	12 12.8	19.71	114.1	PSXR3..	3	P048C			1.48	.02	1.47		
	4.77	-19.6	48.78	41.5			2.5			.036	.033	1.50		
A1534+38.	15 34.0	38 50	62.22	78.5						.99	.43	.89		
	4.72	-19.6	53.95	40.9						.050	.050			
N5962	15 34.24	16 46.4	26.26	108.1	.SAR5...	5	W100V	S F	2	1.45	.13	1.42	1.00	
	4.62	-19.5	50.47	42.5	S 5	3	3.6		4 S	.032	.026	1.45	.03	
I4562	15 34.3	43 39	70.21	72.4	.E.0.S.	-5*	P048N			1.17	.00	1.17		
	3.45	-19.5	53.14	39.6			1.9			.042	.045	1.20		
I4562A	15 34.4	43 40	70.23	72.4										
	3.45	-19.5	53.12	39.6										
A1534+58	15 34.75	58 4.0	91.50	55.8	.E.1.S.	-5*	P048C						*	
MK290	2.29	-19.6	47.95	34.0										
I4566	15 35.0	43 43	70.28	72.3	.SX.2..	2	P048N			1.29	.16	1.25		
	3.44	-19.5	53.00	39.7			2.0			.039	.038	1.27		
I1143	15 35.0	82 38	117.21	32.7	.E.1....	-5	P048N			1.25	.03	1.25		
	-8.19	-20.2	32.80	20.3			3.0			.071	.071	1.31		
A1535+44	15 35.08	44 24.1	71.38	71.4	.S...9..	9	P048N			1.22	.24	1.16		
D200	3.40	-19.5	52.84	39.5	S	9	1.8			.039	.038	1.17		
N5964	15 35.14	6 8.3	12.43	122.1	.SBT7...	7	W100V		2VS	1.62	.09	1.60		
	4.96	-19.4	45.23	40.7			4.0			.034	.029	1.63		
A1535+54	15 35.36	54 43.1	86.92	59.4										
MK486	2.63	-19.5	49.39	35.6										
N5976	15 35.77	59 33.2	93.32	54.1	.LA...*	-2	P048C			1.00	.40	.91		
	2.11	-19.5	47.11	33.4			1.2			.042	.044	.94		
A1535+55	15 35.80	55 25.6	87.85	58.5						.48	.05	.46		
MK487	2.56	-19.4	49.03	35.4						.050	.050			
N5970	15 36.14	12 21.0	20.42	114.1	.SBR5...	5	W060V	SB *G	2	1.47	.15	1.44	1.00	
	4.76	-19.3	48.17	42.3	S 5	4	3.2	S G	3VS	.034	.028	1.47	.03	
I1131	15 36.49	12 14.6	20.34	114.3	.E.1.*.	-5*	P048C			.99	.16	.95		
	4.77	-19.2	48.04	42.4			1.4		3 S	.042	.045	1.00		
N5968	15 36.85	-30 23.5	340.78	161.2	.SXR2..	2	W100V			1.35	.02	1.35		
	6.23	-19.1	19.67	24.1			3.5		3 S	.048	.038	1.42		
N5981	15 36.86	59 33.2	93.22	54.0	.S...5*/	5*	W060V	DS *G		1.45	.70	1.29	*	
	2.10	-19.3	46.99	33.6			2.6		3 S	.032	.027	1.31		
N5982	15 37.64	59 31.1	93.11	54.0	.E.3...	-5	W060V	E4 K	3	1.46	.11	1.44	0.88	
	2.10	-19.2	46.92	33.7	E 3P	-*	3.2		4	.059	.046	1.48	.05	
N5985	15 38.60	59 29.6	92.99	54.0	.SXR3...	3	W060V	S FG	3	1.74	.23	1.69	1.31	
	2.09	-19.1	46.83	33.8	S 3	1	3.6		3 S	.029	.023	1.72	.03	
N5987	15 38.8	58 15	91.36	55.3	.S...3..	3	P048N			1.67	.45	1.56		
	2.24	-19.1	47.40	34.4			2.5			.039	.038	1.59		
N5980	15 39.1	15 57	25.80	109.4	.S.....		P048N			1.32	.41	1.23		
	4.64	-18.9	49.08	43.5			1.8			.039	.038	1.26		
A1539+00	15 39.78	0 37.9	74.16	129.5	.I...9..	10	P048N			1.17	.41	1.07		
D201	5.14	-18.8	41.11	40.1	I	8	1.5			.046	.045	1.09		
N5967A	15 40.5	-75 38	313.15	196.0	.S...*.		S030V							
	12.47	-18.3	-16.52	-5.8										
N5984	15 40.56	14 23.4	23.88	111.6	.SBT7...	7*	W060V	RS *F *		1.47	.51	1.35		
	4.69	-18.7	48.11	43.7	S 3	4*	2.8			.035	.030	1.37		
N5967	15 41.9	-75 31	313.30	196.0	.SXP6*	6	S030V			1.46	.21	1.41		
	12.43	-18.1	-16.49	-5.7			2.5		3VS	.079	.051	1.49		
N5992	15 42.60	41 14.4	65.88	74.8	.S.....		P048N			1.05	.08	1.03		
MK489	3.55	-18.6	52.04	41.8			1.6			.039	.038	1.05		
A1544+46	15 44.90	46 9.1	73.51	68.5										
MK490	3.24	-18.3	50.76	40.5										
A1547+81	15 47.87	81 57.9	116.28	32.9	.SB.8...	8	P048N			1.43	.33	1.35		
D203	-7.62	-18.6	32.95	21.1	SB	8	2.1			.046	.045	1.38		
A1548+16	15 48.97	16 28.8	27.93	109.0	.I...9..	10	P048N			1.36	.05	1.35		
D202	4.60	-17.7	47.11	45.9	I	9	2.2			.071	.071	1.37		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m ₂₈ m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N ₂ (24)	α ₋ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₂ m.e. (28)	V ₀ ΔV (29)	
N5916A				.41												
N5915	12.5	*		.42	*	*									2272	-42
N5916	12.89		13.5	.42											0 1 18	2230
N5920		14.70	14.6	.33	1.10	*	1.12	0.53	.89			1.92			13584*	13622
N5923		.08	15.1	14.13	.04		.03	.06		8 0 0					0 2 24	38
				.21											5568	5723
															1 1 9	155
N5921	12.5	11.45	13.6	.34	0.63	0.02	0.75	0.11	.53			1.50			1475	1503
A1520+29	11.73	.08	14.6	11.04	.04	.05	.03	.03	-.05			1.01	1.77		1 1 34	28
A1522+58				.25											2659	119
A1523+16				.30											1 1 9	2854
															7024	195
N5929				.21											1 1 9	74
12112															2538	2696
															0 1 95	158
N5930				.21											2717	2875
12112				.24											0 1 95	158
A1526+55				.29											3293*	3485
N5949	12.9		13.9	.31	0.59	-.11	*	*							0 2 71	192
N5936	12.94	13.00		.31	.04	.04									380	588
	13.10	.09	13.7	.23											0 1 88	208
A1530+51				.22											5896*	65
				.22											0 2 71	6082
A1531+46				.31											669	843
12115				.31											0 1 45	174
N5951				.31												76
N5953				.31											2175	2252
V244				.31											0 1 95	77
N5954				.25											2133	2210
V244				.25											0 1 95	77
N5963				.25												197
N5965				.25												197
N5957				.22												66
A1534+38.				.30	0.66	0.05	0.75	0.13	.55						5520	5676
12117	12.5	12.05	12.5	11.64	.03	.04	.03	.03	-.03						0 1 105	156
N5962	12.34	.07	13.8	.22											1993	2077
															0 1 75	84
14562				.22											5805	5974
12118				.22											0 1 185	169
14562A				.26	0.70	-.6	*	*							5594	5763
12118		15.15		.26	.03	.1									0 2 40	169
A1534+58		.08		.22											9025	9225
14566				.22											0 1 45	200
11143				.41											5588	5757
A1535+44				.22											0 1 25	169
				.36											6405	6629
N5964				.24								.64			0 1 140	224
A1535+54				.26	1.03							1.01			2629	2800
12121		15.8	14.7	.25	.06										1 0 10	171
N5976		.15		.26												45
A1535+55				.33	0.71	0.06	0.79	0.15	.59						11638	11832
12123	12.4	12.15	12.6	11.69	.03	.04	.03	.03	-.03			.92			0 3 53	194
N5970	12.24	.1	14.0	.33								1.01	2.57		663	203
				.67											0 2 39	196
11131				.33											1992	2061
N5968				.26	0.86	*									1 2 25	69
N5981		13.9		.26	.05											69
N5982	12.5	12.05	11.9	.26	0.92	0.51	0.94	0.54	.83							-92
N5985	12.07	.05	14.1	11.75	.02	.03	.02	.02	.47						2879	204
	12.2	11.80	13.8	.26	0.82	*	0.88	0.36	.70						0 2 28	204
	11.57	.08	14.8	11.34	.05		.04	.04							2467	2671
N5987				.26											0 1 40	204
N5980				.31												203
A1539+00				.39								.32				85
N5967A				.98								1.02			1979	2007
N5984	13.0	*	13.9	.32	*	*									1 0 20	28
	12.94			.32												-209
N5967	12.9			.98												81
N5992	12.67		14.3	.22												
				.22											9594*	-209
A1544+46				.22											0 2 122	9762
A1547+81				.41											2788	168
A1548+16				.32								.85			0 2 109	2969
												1.01			1500	181
												.60			1 0 15	1725
												1.01			2088	225
															1 0 15	2183
																95

NGC IC, A Mk, DDO	Coordinates				Classification					Diameters			
	RA (1950) (1)	Dec (2)	L (3)	SGL (4)	Rev. type DDO type (5)	T (6)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D(0) Log D ₀ (12)	Log A _e m.e. (13)
N6015	15 50.65	62 27.5	95.70	50.0	.SA56..	6	P200V	5 AF	2	1.73	.36	1.65	1.25
	1.58	-17.7	44.13	33.4	S 5	3	4.5		3V5	.032	.024	1.67	.03
N6007	15 51.0	12 6	22.51	115.3	.SX.4*	4	P048N			1.28	.12	1.26	
	4.75	-17.5	44.82	45.8			2.0			.039	.038	1.29	
N6012	15 51.9	14 44	26.02	111.6	.SBT2*	2*	P048N			1.36	.13	1.33	
A1552+19	15 52.90	19 20.3	45.76	46.4	.SBS1*	1*	M082V			.039	.038	1.36	
MK291	4.49	-17.2	47.27	105.0			2.2						
A1553+19	15 53.76	19 2.3	32.04	105.4									
MK292	4.50	-17.1	46.98	47.3									
A1554+42	15 54.9	42 1	66.67	72.8						.66	.18	.62	
	3.45	-17.1	49.67	43.7						.050	.050		
N6020	15 55.1	22 33	37.19	100.2	.E.3...	-5	P048N			1.23	.14	1.20	0.75
	4.37	-17.0	47.81	47.6			1.9			.071	.071	1.24	.06
N6018	15 55.2	16 0	28.13	109.9	.L.....	-2	P048N			1.26	.27	1.20	
	4.61	-16.9	45.54	47.4			1.8			.042	.045	1.24	
N6021	15 55.2	16 5	28.24	109.8	.E.5...	-5	P048N			1.33	.24	1.28	
	4.61	-16.9	45.57	47.4			2.0			.051	.058	1.33	
A1555+30	15 55.4	30 12	48.44	89.0	.SAT4..	4	P048N			1.48	.04	1.47	
	4.05	-17.0	49.35	47.0			2.5			.039	.038	1.49	
N6022	15 55.5	16 25	28.72	109.3	PSBS3..	3	P048N			.89	.15	.86	
	4.60	-16.9	45.64	47.5			1.2			.039	.038	.89	
N6023	15 55.5	16 27	28.77	109.3	.E.3...	-5	P048N			1.14	.13	1.11	
	4.59	-16.9	45.65	47.5			1.7			.050	.050	1.09	
A1556+26	15 56.65	26 57.3	43.64	93.7						.075	.100	.85	
MK492	4.19	-16.8	48.52	47.7						1.35	.26	1.29	*
N6027.	15 57.00	20 53.4	36.96	102.7	.P.....		P200C			.050	.050	1.33	
	4.43	-16.7	46.87	48.1			3.6			.83	.16	.79	
N6027A	15 56.98	20 53.7	34.97	102.7	.S..1P.	1	P200C			.071	.071	.82	
	4.43	-16.7	46.87	48.1			2.6						
N6027B	15 56.98	20 54.1	34.98	102.7	.L...P.	-2	P200C			.67	.31	.60	
	4.43	-16.7	46.88	48.1			2.1			.042	.045	.64	
N6027C	15 57.00	20 53.2	34.96	102.7	.SRSS5/	5	P200C			.99	.63	.85	
	4.43	-16.7	46.87	48.1			2.5			.039	.038	.88	
N6027	15 57.01	20 54.2	34.98	102.7	.L...P.	-2	P200C		3	.71	.27	.64	*
	4.43	-16.7	46.87	48.1			2.3			.042	.045	.68	
N6068A	15 57.16	79 7.7	113.37	34.9	.L...S/	-25	P048C			1.06	.74	.89	
	4.58	-17.3	34.48	23.3			1.0			.050	.050	.94	
A1557+35	15 57.28	35 10.2	56.10	81.8	.SBR3..	3	P048N			1.16	.00	1.16	
MK493	3.81	-16.7	49.41	46.3			1.9			.039	.038	1.18	
N6048	15 57.8	70 50	104.88	41.8	.E.2...	-5	P048N			1.40	.11	1.38	
	-3.30	-16.9	39.25	28.9			2.3			.071	.071	1.43	
N6068	15 57.83	79 8.4	113.36	34.9	.SB.45.	4	P048C			1.09	.17	1.05	
	4.61	-17.2	34.44	23.3			1.6			.038	.036	1.09	
I1155	15 58.3	15 50	28.33	110.3						1.12	.05	1.11	
	4.61	-16.6	46.79	48.1						.075	.100		
A1558+30	15 58.52	30 30.8	49.05	88.4						.68	.07	.66	
MK494	4.03	-16.6	48.73	47.6						.042	.045		
I1158	15 59.0	1 51	12.06	130.2	.SX55..	5	P048N			1.43	.17	1.40	
	5.10	-16.4	37.90	45.0			2.3			.039	.038	1.44	
N6028	15 59.2	19 29	33.28	104.8	RLX...*	-1	P048N			1.23	.06	1.22	0.8
	4.48	-16.4	45.92	48.6			2.0			.042	.045	1.26	.1
I1165A	15 59.8	15 50	28.53	110.3						.79	.00	.79	
	4.61	-16.4	44.46	48.5						.075	.100		
I1165B	15 59.8	15 50	28.53	110.3						.70	.00	.70	
	4.61	-16.4	44.46	48.5						.075	.100		
A1559+18	15 59.81	18 57.2	32.63	105.6	.P.....		P048N			.94	.27	.88	
MK294	4.50	-16.4	45.61	48.7			1.2			.050	.050	.92	
A1600+16A	15 59.9	16 2	28.80	110.0	.LB...P	-3	P048C			1.08	.08	1.06	
	4.60	-16.4	44.52	48.5			1.7			.051	.058	1.11	
A1600+16B	15 59.9	16 4	28.84	110.0	.S..1SP	15	P048C			.75	.09	.73	
	4.60	-16.4	44.53	48.5			1.0			.039	.038	.77	
A1600+16C	16 0.0	16 6	28.90	109.9	.LA...P	-3	P048C			1.34	.18	1.29	
	4.60	-16.3	44.52	48.5						.051	.058	1.34	
N6032	16 0.8	21 6	35.66	102.4	.SBT3*	3*	PG48C			1.26	.31	1.19	
	4.41	-16.3	46.09	49.0			2.1			.039	.038	1.22	
N6035	16 1.2	21 2	35.61	102.5	.SXT5..	5	PG48C			1.07	.04	1.06	
	4.41	-16.2	45.98	49.1			2.0			.039	.038	1.09	
A1601+19	16 1.22	19 17.9	33.26	105.1									
MK296	4.48	-16.2	45.41	49.0									
N6040A	16 2.19	17 52.8	31.49	107.3	.SA.0P.	0	P200C			.91	.03	.91	
	4.53	-16.1	44.70	49.2			2.9			.039	.038	.95	
N6040B	16 2.20	17 53.3	31.51	107.3	.SXR6P.	6	P200C			1.20	.30	1.13	
	4.53	-16.1	44.70	49.2			3.2			.046	.045	1.16	
N6041B	16 2.34	17 51.4	31.48	107.4	.LB...*	-3	P200C			.48	.12	.46	
	4.53	-16.0	44.66	49.2			2.0			.050	.050	.51	
N6041A	16 2.35	17 51.5	31.48	107.3	.LX...*	-3	P200C			1.17	.04	1.16	0.8
	4.53	-16.0	44.66	49.2			3.4			.071	.071	1.21	.1
N6041.	16 2.35	17 51.5	31.48	107.3	.LX...*	-3	P200C			1.20	.03	1.19	
	4.53	-16.0	44.66	49.2						.042	.045	1.24	
N6044	16 2.75	18 0.3	31.72	107.1	.LA...*	-3	P200C			.73	.00	.73	
	4.53	-16.0	44.62	49.3			2.6			.075	.100	.78	
N6051	16 2.81	24 3.9	39.96	97.8	.E.4...	-5	P048N			1.28	.19	1.23	0.85
	4.29	-16.0	46.49	49.3			1.9			.071	.071	1.27	.09
A1602+34	16 2.87	34 45.2	55.56	81.9						.70	.10	.68	
	3.81	-16.0	48.24	47.5						.075	.100		
N6045	16 2.88	17 53.5	31.59	107.3	.SBT6*	6	P200C			1.12	.63	.97	0.55
	4.53	-16.0	44.55	49.4			2.7			.039	.038	1.00	.05
N6047	16 2.90	17 51.3	31.55	107.4	.LA...*	-3	P200C			1.10	.00	1.10	0.65
	4.53	-16.0	44.53	49.4			3.3			.051	.058	1.15	.04
I1173	16 2.96	17 33.5	31.17	107.8	.SXT5*	5	P200C			1.10	.21	1.05	
	4.54	-16.0	44.41	49.4			3.1			.039	.038	1.08	
N6052.	16 3.02	20 40.5	35.31	103.0	.S...5..	5	M082V	I A *	4	.98	.11	.95	*
MK297	4.42	-16.0	45.47	49.5			2.5			.036	.033	.98	
N6050	16 3.14	17 53.6	31.63	107.3	.SXT5..	5	P200C						
	4.53	-15.9	44.49	49.4									
N6056	16 3.28	18 6.0	31.91	107.0	.SXR1*	1	L120C						
	4.52	-15.9	44.54	49.5									
I1178	16 3.29	17 44.0	31.43	107.6	.LA...P	-3	P200C			1.14	.11	1.12	
	4.54	-15.9	44.40	49.4			3.3			.051	.058	1.17	

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _g m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)	
N6015	12.1	11.65	13.4	.28	0.57	-.06	0.64	-.01	.43			1.52		833*	1047	PT
N6007	11.69	.06	14.2	11.08 .35	.02	.04	.02	.03	-.16			3 .02	1.66	3 2 8 10548 1 1 14	214 10629 81	
N6012				.33											91	
A1552+19				.31										10670*	10778	
A1553+19				.31										0 2 35 9833 0 1 220	108 9941 108	
A1554+42				.23										10395	10573	
12129														0 2 27	178	
N6020		13.55	12.8	.29	0.97 .05		0.98 .05									121
N6018		.13	14.3	.33										5121	5220	
N6021				.33										0 1 150 4486	99 4585	
A1555+30				.25										0 1 150 9846	99 9992	
N6022				.33										1 1 10	146	
N6023				.33										11225	11325	
A1556+26				.27										0 1 150 11140	100 11240	
N6027.		13.35		.30	0.91 .03	0.32 .04	*	*						0 1 150 4182	100 4319	
N6027A		.07	14.3	.30	1.00 .06									0 1 220	137	
7Z631=V115		15.0 .15	.30 13.6	14.52					.87					4095*	117 4212	
N6027B				.30										0 2 42	117	
7Z631=V115				.30										4168*	4285	
N6027C				.30										0 4 28 4498	117 4615	
7Z631=V115				.30										0 2 42	117	
N6027		14.7		.30	0.93 .04		*		.80					4424	4541	
7Z631=V115		.1	12.4	14.23 .39										0 4 26 4028	117 4255	
N6068A				.24										0 1 95 9900	227 10062	
A1557+35				.33	*	*								0 1 200	162	
N6048		*		.39						4 0 0				3957	224 4184	
N6068				.33										0 1 95 10629	227 10730	
11155				.25										0 1 150 9510	101 9659	
A1558+30				.43										0 1 100 1929	149 1978	
11158				.31	0.85 .05	0.45 .1	0.85 .05	0.50 .1	.73 .40					1 1 9	49	
N6028		14.0	13.5	.34										4456	4570	
12133		.2	14.9	13.59										0 2 56 10136	114 10238	
11165A				.34										0 1 150 10109	102 10211	
V 90				.34										0 1 150	102	
11165B				.32										2525	2638	
V 90				.33										1 2 39 10489	113 10592	
A1559+18				.33								.00 1 .01		0 2 39	103	P
A1600+16A				.33										13178	13281	P
3Z 75=V159				.33										0 2 39 10384	103 10487	P
A1600+16B				.33										0 3 36 4279	103 4400	P
3Z 75=V159				.30										0 1 56 2236	121 2357	
A1600+16C				.30										0 1 75 4773	121 4888	
V159				.32	*	*								0 1 220	115	
N6032				.33										12386	12497	P
N6035				.33										0 1 150 12618	111 12729	P
A1601+19				.33										0 1 150	111	
N6040A				.33											111	
V212				.33										10465	10576	
N6040B				.33										0 2 41	111	
V212				.33												
N6041B				.33										9936	10048	
V213				.33										0 1 50 9445	112 9577	
N6041A		14.7	14.2	.33	0.98 .05	0.61 .06	1.00 .05	0.65 .06		1.78 2 1 2 1.40* 1 1 0	.69 .69* .825		-1.45	0 1 105 9480	132 9644	
V213		.2	15.3	.33										0 1 150 9913	164 10024	
N6041.				.33										0 2 41	111	
V213				.32	*	*								9470	9581	
N6044		15.6		.32										0 1 50	111	
N6051		.15	14.1	15.13 .29	1.10 .04	0.49 .04	1.11 .05	0.55 .06	.95 .47					0 1 150 9470	132 9581	
A1602+34		14.05 .09	13.8 15.0	13.62 .24										0 1 150 9913	164 10024	
N6045		.13	13.3	.33	0.95 .04	0.11 .04	1.00 .04	0.16 .04	.70 -.12					0 2 41	111	
N6047		14.65 .08	14.0 13.4	14.22 .33	1.10 .04	0.5 .1	1.10 .04	0.55 .1	.94 .47	1.90 3 2 3	.57 .73		-2.31	0 1 50	111	
11173				.33										10889	10999	
N6052.		13.0	13.45	.31	0.45 .02	-.37 .02	*	*	.33 -.46					0 1 72 4700	110 4821	P
V 86		13.74	.05	12.9										0 5 13	121	
N6050				.33										11105	11217	P
N6056				.32										0 1 72 11707	112 11820	
11178				.33										0 1 72 10373	113 10484	P
V194														0 1 72	111	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log A _e m.e. (14)
N6055	16 3.30	18 17.7	32.17	106.7	.LX...*	-1	L120C			1.18	.19	1.13	
I1181	4.51	-15.9	44.60	49.5			3.1			.051	.058	1.17	
	16 3.31	17 43.5	31.43	107.6	.SXS0P.	0	P200C			1.05	.05	1.04	
	4.54	-15.9	44.40	49.5			3.2			.046	.045	1.08	
I1182	16 3.36	17 56.1	31.71	107.3	.L...P.	-1	P200C			.80	.00	.80	
MK292	4.53	-15.9	44.46	49.5			2.7			.075	.100	.84	
I1183	16 3.38	17 54.0	31.66	107.3	.LX...*	-3	P200C			.96	.35	.88	*
	4.53	-15.9	44.44	49.5			2.7			.050	.050	.93	
I1186	16 3.48	17 29.8	31.15	107.9	.SAS2S.	2	P200C			.91	.16	.87	
	4.54	-15.9	44.27	49.5			2.8			.061	.058	.90	
I1185	16 3.49	17 51.0	31.61	107.4	.SAS2S.	2	P200C			.89	.13	.86	*
	4.53	-15.9	44.40	49.5			2.8			.050	.050	.89	
N6060	16 3.7	21 38	36.68	101.6	.SXT4..	4	PG48C			1.35	.25	1.29	
	4.39	-15.9	45.61	49.6			2.3			.039	.038	1.32	
I1189	16 4.00	18 18.9	32.28	106.7	.SBS0..	0	L120C			.79	.18	.75	
MK300	4.51	-15.8	44.45	49.6			2.4			.061	.058	.79	
N6061	16 4.03	18 23.0	32.37	106.6	.LA...*	-3	L120C			1.15	.06	1.14	
	4.51	-15.8	44.47	49.7			3.2			.051	.058	1.19	
I1194	16 4.41	17 53.7	31.78	107.3	.LA...P*	-3	L120C			.73	.00	.73	*
	4.53	-15.8	44.21	49.7			2.4			.075	.100	.78	
I1195	16 4.42	17 19.5	31.04	108.2	.S...3S.	3S	P048C			.76	.13	.73	
	4.55	-15.8	44.00	49.7			1.0			.061	.058	.76	
A1605+55	16 5.0	55 33	85.75	55.8	.SBS5P.	5	P200C			1.21	.24	1.16	
	2.33	-15.9	45.15	34.9			3.3			.039	.038	1.18	
N6070	16 7.43	0 50.4	122.48	132.6	.SAS6P.	6	W100V	S F	25	1.56	.24	1.50	1.15
	5.13	-15.4	35.59	46.6	S 5	1	3.7			.028	.021	1.54	.04
A1607+41	16 7.5	41 52	66.16	71.7						.87	.14	.84	
	3.40	-15.5	47.34	45.9						.075	.100		
N6090	16 10.40	52 35.0	81.40	58.4						1.27	.34	1.19	
MK496	2.58	-15.1	45.21	41.2						.075	.100		
N6086	16 10.61	29 36.9	48.34	88.9	.E+2...	-5	P048N			1.31	.10	1.29	
	5.03	-15.0	46.00	50.3			2.1			.051	.058	1.33	
A1610+60	16 10.7	-60 48	325.28	188.1									
	8.73	-14.7	-7.22	7.0									
A1614+47	16 14.82	47 10.0	73.63	64.2	.SBS9..	9	P200C			1.45	.09	1.43	
D204	3.01	-14.5	45.53	44.7			3.9			.046	.045	1.44	
A1615+52	16 15.47	52 8.1	80.53	58.3			1.5			.87	.14	.84	
MK497	2.60	-14.5	44.56	42.1			1.3			.075	.100		
N6109	16 15.82	35 7.5	56.39	80.2						1.10	.00	1.10	
	3.75	-14.4	45.63	49.9						.051	.058		
N6106	16 16.36	7 32.0	21.02	124.1	.SAS5..	5	W100V	S F	03VS	1.41	.23	1.35	0.97
	4.89	-14.2	37.17	50.9	S 4	4*	3.4			.034	.029	1.39	.03
A1616+59	16 16.4	59 27	90.20	50.6	.S...P.		P048N	S *F *		1.27	.64	1.12	
	1.78	-14.4	42.46	37.7			1.5			.039	.038	1.15	
A1616+63	16 16.72	63 58.3	95.84	46.4	.IB.9..	10	P048N			1.22	.27	1.15	
D205	1.08	-14.4	40.83	34.8		8*	1.7			.050	.050	1.16	
N6120	16 18.0	37 54	60.38	75.9	.P.....		P048N			.75	.09	.73	
	3.60	-14.1	45.36	49.4			1.0			.050	.050	.74	
A1619+40	16 19.2	40 14	63.70	72.5	.SB.2..	2	P048N			1.21	.38	1.12	
	3.46	-13.9	45.18	48.6			1.6			.039	.038	1.15	
N6118	16 19.21	-2 10.1	11.46	138.5	.SAS6..	6	W100V	S F	2 S	1.67	.31	1.60	
	5.23	-13.8	31.47	48.1	S 3	3	3.8			.031	.025	1.64	
N6143	16 20.59	55 12.2	84.43	54.4	.SXT4..	4*	W060V			1.07	.01	1.07	
	2.26	-13.8	43.12	40.9			2.5			.037	.035	1.09	
N6140	16 20.60	65 30.4	97.49	44.7	.SBS5P.	5	P048C			1.79	.12	1.76	
	.76	-13.9	39.85	34.0			3.0			.039	.038	1.79	
A1620+20	16 20.8	20 39	37.12	103.0									
	4.40	-13.7	41.52	53.6									
N6137	16 21.28	38 2.3	60.62	75.4	.E+4...	-5	P048N			1.35	.19	1.30	
	3.58	-13.7	44.72	49.9			2.1			.071	.071	1.34	
A1621+39	16 21.9	39 20	62.44	73.5									
	3.50	-13.6	44.65	49.5									
A1622+54	16 22.0	54 16	83.12	55.2									
	2.35	-13.6	43.14	41.6									
A1622+41	16 22.1	41 12	65.07	70.9									
MK699	3.39	-13.6	44.63	48.7									
A1623+41	16 23.0	41 8	64.97	70.8	.S...\$P		P048C			.61	.00	.61	
	3.39	-13.4	44.47	48.9			.8			.050	.050	.63	
N6154	16 24.2	49 57	77.20	59.7	.SBR1..	1	P048N			1.38	.02	1.38	
	2.75	-13.3	43.60	44.5			2.3			.046	.045	1.41	
A1625+40	16 25.1	40 48	64.51	71.0									
	3.40	-13.2	44.07	49.4									
A1625+41	16 25.3	41 22	65.30	70.2						1.12	.00	1.12	
	3.37	-13.1	44.03	49.1						.075	.100		
A1625+20	16 25.6	20 10	37.00	103.8									
	4.41	-13.0	40.30	54.8									
A1626+38	16 26.0	38 31	61.35	74.1									
	3.54	-13.0	43.82	50.5									
N6158	16 26.0	39 30	62.71	72.7									
	3.48	-13.0	43.87	50.1									
N6160	16 26.0	41 2	64.84	70.6	.E+2...	-5	P048N			1.32	.08	1.31	
	3.38	-13.0	43.90	49.4			2.1			.071	.071	1.35	
N6166	16 26.93	39 39.6	62.94	72.3	.E+2.P.	-4	P200C			1.38	.12	1.35	0.98
	3.47	-12.9	43.69	50.2			3.8			.066	.057	1.39	.04
A1627+17	16 27.6	17 12	33.61	109.0									
	4.52	-12.7	38.81	55.2									
A1627+40	16 27.7	40 59	64.77	70.4						.79	.00	.79	
	3.38	-12.8	43.58	49.7						.075	.100		
N6173	16 28.1	40 55	64.68	70.5	.E+3...	-5	P048N			1.35	.13	1.32	
	3.38	-12.8	43.50	49.8			2.1			.071	.071	1.36	
N6181	16 30.16	19 55.9	37.17	104.1	.SXTS..	5	W100V	S F	2 VS	1.41	.30	1.34	0.74
	4.41	-12.4	39.21	55.8	S 5	1	3.3			.033	.027	1.37	.03
A1631+35	16 31.3	35 1	56.70	78.6						.75	.00	.75	
	3.72	-12.3	42.46	52.9						.075	.100		
N6186	16 32.2	21 39	39.47	101.0	.PSBS1..	1	P048N			1.26	.11	1.24	
	4.34	-12.1	39.32	56.2						.039	.038	1.28	
I1222	16 33.6	46 19	72.04	62.7	.SXS5..	5	P200C			1.27	.10	1.25	
	3.00	-12.0	42.46	47.8			3.6			.039	.038	1.27	
A1634+52	16 34.0	52 20	80.10	55.8						.48	.09	.46	
	2.48	-12.0	41.74	44.2						.050	.050		

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _C (15)	B _T m.e. (16)	m _g m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _g (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)			
N6055				.32											11368 0 2 20 10739 0 1 72 10230 0 3 34 10038 0 1 75 11061 0 1 72	11481 113 10850 111 10342 112 10150 112 11172 111		
I1181				.33											10452 0 1 200 4550 0 1 75 11927 0 1 220 11218 0 1 72 11642 0 1 65	10564 112 4675 125 12041 114 11332 114 11755 113		
V194																		
I1182		15.7		.33	*	*												P
V220		.15	14.6	15.22														
I1183		15.35		.33	1.07	0.64	*	*	.88									
V220		.09	14.1	14.80	.05	.06			.59									
I1186				.33														
I1185		14.75		.33	0.89		*		.71									
N6060		.09	13.7	14.21	.04													
I1189				.32														
N6061				.32						1.45 2 2 0	1.80							
I1194		15.25		.33	0.98		*		.79									
		.2	13.8	14.75	.05													
I1195				.33														
A1605+55				.26														S
V 29																		P
N6070	12.7	12.35	13.6	.46	0.67	0.10	0.72	0.14	.51			1.17		2008	210		P	
	12.36	.08	14.4	11.69	.03	.04	.03	.04	-.02			2 .01	1.95	2 2 9	2060			
A1607+41				.23										7711	7896			
I2134				.25										0 1 105	185			
N6090														8754	8962			
I2135														0 3 38	208			
N6086				.27						1.11* 1 1 0 3.75 0 1 1	.745			9394 0 1 120 155 8474*	9549 155 8305			
A1610+60		*		2.44	*	*								0 1 35	-169			
A1614+47				.24								.99		716	917		P	
A1615+52				.25								1 .01		1 0 10	201			
N6109				.25						2.305 1 0 1	.815 .815			9816 0 2 71 8880 0 1 150	10026 210 9054 174			
N6106	12.9	12.80	13.1	.42	0.60	-.06	0.70	0.03	.45					1475	1560			
A1616+59	12.82	.07	14.1	12.19	.03	.03	.03	.03	-.17					0 1 52	85			
A1616+63				.30											221			
N6120				.24											225			
I2141				.24										9217	9400			
A1619+40														0 3 38	183		S	
N6118	12.3			.52								1.04		1568	1618		P	
N6143	11.91		14.3	.26								1 .01		1 0 10	50			
N6140				.31											217			
A1620+20				.33											228			
N6137				.25						1.63* 1 1 1	.625 .505			7900 0 1 100 9300 0 1 150	8035 135 9485 185			
A1621+39				.24										8395 0 1 105 5432 0 1 105	8584 189 5649 217		S	
A1622+54				.26										10202 0 2 80 8095 0 1 105	10395 193 8269 194			
I2147				.24	0.60	-.50	*	*							211			
A1622+41		15.75		.24	.03	.05												
3Z 77		.07		.24														
A1623+41				.24														
I2148				.25														
N6154																		
A1625+40				.24										9325 0 1 185 8605 0 1 105	9519 194 8800 195			
3Z 78				.24										3700 0 1 50 10038 0 1 105	3837 137 10227 189		S	
A1625+20				.34										8909 0 1 70	9101 192			
A1626+38				.25										9408 0 2 77 8882 0 1 71	9603 195 9075 193			
I2152		13.05	13.4	.25	1.06	0.53	1.07	0.58	.92	2.56 21 4 3	1.08 1.57		-2.47	4600 0 1 50 8175 0 1 185	4729 129 8371 196			
N6158		.06	14.6	12.67	.03	.04	.03	.04	.52					8727 0 1 150	8923 196			
N6160				.25														
N6166				.25														
A1627+17				.25														
A1627+40				.25														
3Z 82				.25														
N6173				.25														
N6181	12.6	12.50	11.7	.35	0.63	-.01	0.73	0.05	.48			1.05		2372 1 2 12 10810 0 1 105	2512 140 10994 184		PST	
A1631+35	12.68	.05	13.6	11.90	.02	.02	.03	.02	-.12			2.04						
I2156		15.9		.26	.78	.23												
N6186		.15		.34	.06	.07												
I1222				.25														
A1634+52				.26										9224 1 1 10 2662 0 1 105	147 9434 2882 220		P	
I2159																		

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log Do (13)	Log Ae m.e. (14)
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
A1634+01	16 34.2 5.09	1 45 -11.8	17.67 30.43	135.4 53.1	.S..4..	4	P048N 1.8			1.11 .039	.04 .038	1.10 1.15	
N6195	16 34.8 3.47	39 8 -11.8	62.33 42.15	72.0 51.8	.S..3..	3	P048N 1.9			1.25 .039	.15 .038	1.21 1.23	
N6217	16 35.05 -4.70	78 18.0 -12.4	111.32 33.37	34.0 25.2	RSBT4.. S S K	4 2	P200V 4.3	S AF*	5 4 S	1.49 .030	.06 .024	1.48 1.52	1.05 .05
N6196	16 36.10 3.64	36 10.3 -11.7	58.39 41.63	76.1 53.4	.LX..-P	-3	M082C 3.0			1.23 .050	.14 .050	1.20 1.24	0.75 .07
A1636+42A	16 36.7 3.29	42 2 -11.6	66.25 41.91	67.7 50.7	.RING.A	-2P	P200V						
A1636+42B	16 36.7 3.29	42 2 -11.6	66.25 41.91	67.7 50.7	.RING.B	10P	P200V 3.3			1.11 .042	.34 .045	1.02 1.03	
A1639+58	16 39.6 1.80	58 13 -11.3	87.56 39.90	49.2 40.8	.S..5..	5	P048N 1.9			1.17 .039	.01 .038	1.17 1.19	
N6211	16 40.57 1.84	57 52.7 -11.2	87.09 39.84	49.4 41.1	.LBR+P*	-1	P048C 2.0			1.30 .042	.13 .045	1.26 1.30	
N6207	16 41.30 3.58	36 55.7 -11.0	59.55 40.68	74.2 54.0	.SAS5.. S S	5 3*	P200V 4.0	SIP*FG*	5 1	1.48 .038	.33 .030	1.41 1.43	0.85 .03
N6223	16 42.5 1.28	61 40 -10.9	91.79 38.76	45.8 38.5	.P.....		P048N 2.5			1.53 .071	.13 .050	1.50 1.54	
N6236	16 45.0 2.87	70 53 -10.8	102.77 35.77	38.5 31.5	.SXS6..	6	P048N 2.3			1.48 .039	.22 .038	1.42 1.45	
A1646+62	16 46.1 1.06	62 54 -10.5	93.19 38.05	44.4 37.8	.S..3..	3	P048N 1.6			1.42 .039	.85 .038	1.22 1.25	
N6215	16 46.80 8.68	-58 54.3 -9.8	329.79 -9.27	190.8 11.1	.SAS5..	5 5	B060V 2.9		3VS	1.30 .075	.10 .047	1.28 1.43	
A1647+48A	16 47.05 2.75	48 47.6 -10.2	75.17 40.01	57.7 48.1						.43 .050	.00 .050	.43 .51	
A1647+48B	16 47.23 2.75	48 48.0 -10.2	75.18 39.98	57.6 48.1						.61 .050	.42 .050		
A1648+45A	16 47.97 3.01	45 32.5 -10.1	70.93 39.93	61.3 50.3	.L..0*P	-2*	P200C						
A1648+45B	16 48.00 3.01	45 32.7 -10.1	70.93 39.92	61.3 50.3	.SA.1*P	1	P200C						
A1648+45C	16 48.08 3.0	45 34.8 -10.1	70.98 39.91	61.3 50.3	.LXT+P.	-1	P200C 2.3			.59 .075	.00 .100	.59 .62	
A1648+53A	16 47.9 2.31	53 30 -10.1	81.26 39.51	52.6 45.0	.E.2.P*	-5*	P200C 2.2			.56 .075	.08 .100	.54 .58	
A1648+53B	16 48.0 2.31	53 30 -10.1	81.26 39.49	52.5 45.0	.SB54*P	4	P200C 2.2			.54 .061	.00 .058	.54 .57	
A1648+53C	16 48.0 2.31	53 31 -10.1	81.28 39.49	52.5 45.0	.E.1.*	-5*	P200C						
A1648+53D	16 48.0 2.30	53 32 -10.1	81.30 39.49	52.5 44.9	.E.2.P*	-5*	P200C						
A1648+53E	16 48.1 2.30	53 33 -10.1	81.32 39.47	52.5 44.9	.LX.-S.	-3*	P200C 2.0			.54 .075	.18 .100	.50 .54	
A1648+53F	16 48.1 2.30	53 33 -10.1	81.32 39.47	52.5 44.9	.E.0.*	-5*	P200C						
N6215A	16 48.3 8.68	-58 51 -9.6	329.96 -9.38	190.9 11.3	.S...S.		S030V						
N6221	16 48.42 8.72	-59 8.0 -9.6	329.75 -9.57	191.1 11.1	.SB5S..	5 3	R074V 3.4			1.50 .054	.13 .034	1.47 1.61	
N6239	16 48.51 3.20	42 49.4 -10.0	67.39 39.76	64.7 52.0	.SB53P*	3S	P200V S 3 T	BIP*AF	4 S 1	1.44 .034	.31 .029	1.37 1.40	0.80 .03
N6246	16 48.87 2.07	55 37.7 -10.0	83.97 39.10	50.3 43.5	.SB.3S.	3	P048C 1.7			1.23 .039	.34 .038	1.15 1.18	
N6246A	16 49.20 2.09	55 28.2 -10.0	83.76 39.08	50.5 43.7	.SBRS5*	5	P048C 2.3			1.39 .039	.03 .038	1.38 1.40	
N6240	16 50.46 5.06	2 29.1 -9.6	20.74 27.29	137.2 57.1	.I.0.*P	0*	M082C 3.0			1.34 .036	.28 .032	1.28 1.35	
A1652+39	16 52.20 3.38	39 50.1 -9.5	63.60 38.86	68.1 54.3						1.10 .071	.07 .071	1.09 1.08	
N6255	16 53.0 3.58	36 35 -9.3	59.50 38.31	72.8 56.2	.SB.6.*	6*	P048N 2.3			1.54 .039	.35 .038	1.46 1.48	
A1653+53	16 53.20 2.32	53 11.6 -9.4	80.77 38.75	52.0 45.7	.SB.8..	8	P048N 1.8			1.15 .039	.11 .038	1.12 1.14	
N6275	16 55.12 1.93	63 19.2 -9.2	93.41 36.96	43.0 38.1									
MK503	16 55.23 2.10	55 6.2 -9.1	83.16 38.27	49.9 44.5	.SB5S.*	5	P048C 1.9			1.33 .046	.29 .045	1.26 1.28	
I1236	16 56.3 4.37	20 7 -8.8	39.99 33.50	103.2 62.0	.SXS5..	5	P048N 1.7			1.09 .039	.02 .038	1.08 1.11	
A1656+38	16 56.3 3.47	38 17 -8.9	61.75 37.89	69.6 55.8						.89 .050	.00 .050	.89 1.05	
N6285	16 57.6 1.60	59 3 -8.8	88.07 37.44	46.1 41.7	.L...S*	-1S	P200C 3.1			1.10 .042	.24 .045	1.05 1.09	
N6286	16 57.8 1.60	59 2 -8.8	88.04 37.42	46.1 41.7	.S..3*P	3*	P200C 3.5			1.19 .039	.03 .038	1.18 1.21	
A1659+29	16 59.17 3.94	29 28.8 -8.4	51.09 35.65	83.9 60.5						.58 .075	.14 .100	.55 1.08	
A1704+34	17 4.9 3.69	34 8 -7.7	57.00 35.50	76.4 59.5									
N6296	17 6.25 5.01	3 57.4 -7.4	24.30 24.56	138.0 61.3	.SXS3S.	3	P048C 1.6			1.04 .038	.10 .037	1.02 1.08	
N6306	17 6.98 1.30	60 47.5 -7.5	90.01 36.03	43.5 41.0	.SB52*P	2*	M082C 2.3			1.09 .039	.48 .038	.97 1.00	
N6307	17 7.05 1.30	60 48.8 -7.5	90.03 36.02	43.4 41.0	PSB50P.	0	M082C 2.9			1.20 .038	.11 .035	1.18 1.22	
N6310	17 7.35 1.26	61 3.6 -7.5	90.33 35.95	43.2 40.8	.S..3*/	3*	P048C 1.6			1.33 .038	.60 .037	1.19 1.22	
N6308	17 9.91 4.22	23 26.4 -6.9	44.95 31.63	94.8 64.6	.SXT5*.	5	P048C 1.8			1.13 .037	.05 .033	1.12 1.15	
N6314	17 10.55 4.22	23 19.8 -6.8	44.89 31.45	95.0 64.8	.SAS1*/	1	P048C 1.8			1.25 .038	.29 .035	1.19 1.23	0.70 .06
N6315	17 10.67 4.22	23 16.9 -6.8	44.84 31.41	95.1 64.8	.SB55*.	5	P048C 1.4			.97 .038	.07 .035	.95 1.08	0.60 .05
I1248	17 11.11 1.40	60 3.3 -6.9	89.03 35.62	43.5 41.9	.SBRS5..	5	P048C 1.9			1.16 .050	.00 .050	1.16 1.19	
N6340	17 11.27 -1.64	72 21.9 -7.1	103.73 33.35	35.5 31.4	.SAS0.. S 0P	0	P200V 4.4	DS *G	3 3 S	1.53 .050	.05 .038	1.52 1.57	1.12 .03

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _g m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T m.e. (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
A1634+01				.53										7358	7436	
N6195				.25										0 1 25	78	
N6217	12.6	11.85	12.6	.40	0.63	-.17	0.70	-.08	.52			1.44\$		0 1 30	9196	P
N6196	12.23	.07	14.0	11.39	.04	.05	.06	.05	-.25			4.01	1.58\$	0 1 30	1586	
A1636+42A				.25	1.04	0.41	1.09	0.56						4 2 7	233	
12162		.08	14.5		.04	.04	.03	.03							190	P
A1636+42B		15.0		.25	.85	.16			.66					8557	8761	
12162		.15	14.5	14.41	.06	.07			.00					0 1 86	204	
A1639+58				.29										8103	8307	P
N6211				.29										0 1 86	204	
72655				.27										5413	5642	
N6207	12.3	12.15	11.9	11.61	0.53	-.18	0.53	-.07	.40			1.19		1 1 24	230	P
N6223	12.33	.07	13.6	.31	.03	.03	.02	.02	-.27			1.01	1.98		196	
72657				.36											233	
N6236				.32											237	
A1646+62				.27											235	
N6215	11.2			1.74						1.48\$	.78*			1532	1384	P
A1647+48A	11.79		12.9	.27						1 0 3	.78*			0 1 60	-148	
12166				.27										7679	7901	
A1647+48B				.27										0 4 29	222	
A1648+45A				.26										7717	7939	
A1648+45B				.26										0 2 71	222	
A1648+45C				.26										9418	9635	P
A1648+53A				.28										0 1 14	217	
12167				.28										9402	9619	P
A1648+53B				.28										0 2 20	217	
12167				.28										9449	9666	P
A1648+53C				.28										0 1 48	217	
12167				.28										8928	9156	P
A1648+53D				.28										0 1 105	228	
12167				.28										8072	8300	P
A1648+53E				.28										0 1 105	228	
12167				.28										8783	9011	P
A1648+53F				.28										0 1 105	228	
12167				.28										9005	9233	P
N6215A				1.72										0 1 105	228	
N6221	11.4	*	13.5	1.68	*	*				1.51\$	.73\$			1403	1254	P
N6239	11.50		12.3	.26	0.46	-.21	0.51	-.17	.33	1 0 2	.73\$			0 1 150	-149	
N6246	13.1	12.80	12.3	.29	.03	.03	.02	.02	-.30			1.19		947	1159	
N6246A	12.93	.05	14.1	.29								1.02	1.29	1 1 13	212	
N6246A				.28											231	
N6240				.58						1.62\$	.83\$			7503	7597	
A1652+39		*		.27	*	*				2.18	.14			0 1 270	94	
N6255				.28						2 2 1	.14*			10093	10302	
ZCG				.28										0 2 59	209	
A1653+53				.28								.75		1095	1325	
N6275				.32								1.01		1 0 10	230	
72667				.29										6739*	6978	
11237				.39										0 2 71	239	
11236				.28											233	
A1656+38				.31										6039	6199	
22 75				.31										1 1 13	160	
N6285				.31										10020	10228	
N6286				.32	.83	-.50								0 1 185	208	P
A1659+29		16.3		.30	.06	.07									238	
A1704+34		.15		.63										10943*	11132	
12173				.32										0 2 71	189	
N6296				.32										9116	9320	
N6306				.32										0 1 105	204	
N6307				.32											112	
N6310				.32										2973*	3215	
N6308				.38										0 2 28	242	
N6314		13.85	12.8	.38	0.79		0.83		.59					3057*	3299	
N6315		.13	14.2	.38	.04	0.30	1.01	0.40						0 2 31	242	
11248		14.25	12.7	.32	.03	.1	.03	.1							180	
N6340	12.8	11.90	13.0	.39	0.87	*	0.91	0.44	.76			.75		1903	2146	P
	12.27	.09	14.3	11.45	.03	.02	.03	.03				1.01	3.24	1 0 52	243	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log D ₀ (12)	Log A _g m.e. (13)
	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
N6300	17 12.28	-62 45.9	328.50	195.4	.SBR3..	3	R060V		2	1.73	.18	1.69	
I1254	17 12.42	-6.2	14.05	9.2			3.6			.038	.024	1.80	
	17 12.42	72 27	103.68	35.3	.S...3SP	3S	P048C			1.27	.31	1.19	
	17 12.42	-1.68	33.25	31.3			1.8			.046	.045	1.23	
A1712+59A	17 12.5	59 23	88.19	43.8	.I...9P.	10	P200C			1.07	.31	1.00	
	17 12.5	-6.7	35.51	42.6			2.9			.050	.050	1.02	
A1712+59B	17 12.5	59 23	88.19	43.8	.SB.9SP	9	P200C			.94	.54	.81	
	17 12.5	-6.7	35.51	42.6			2.5			.050	.050	.83	
A1716+48	17 16.6	48 31	74.85	52.5									
	17 16.6	-6.1	35.13	51.7									
A1717+73	17 17.3	73 29	104.89	34.4						1.19	.21	1.14	
	17 17.3	-6.3	32.65	30.6						.042	.045		
N6359	17 17.37	61 49.9	91.09	41.3	.LA.-*.	-3	P048C		3 5	1.09	.15	1.06	
	17 17.37	-6.1	34.67	40.8			1.6			.067	.059	1.11	
A1717+14	17 17.58	14 27.0	36.12	116.5	.SB.9..	9	P048N			1.26	.03	1.25	
O207	17 17.89	-0 55.8	21.21	149.9	.SA	9*	2.1			.039	.038	1.28	
A1717-00	17 17.89	-0 55.8	21.21	149.9	.LA.-*.	-3*	P048C						0.40
	17 17.89	-5.7	19.65	61.3									.05
A1718+49A	17 17.94	49 1.9	75.49	51.7	.E.0...	-5	P200C			1.06	.10	1.04	
	17 17.94	-5.9	34.94	51.4			3.1			.071	.071	1.09	
N6361	17 18.0	60 40	89.67	42.0	.SA.3*/	3	P200C			1.38	.48	1.27	
	17 18.0	-6.0	34.71	41.8			3.4			.039	.038	1.30	
A1718+49B	17 18.06	49 5.5	75.56	51.6	.SX.3P.	3	P200C			1.05	.19	1.01	
	17 18.06	-5.9	34.92	51.4			3.0			.039	.038	1.04	
A1719+57	17 19.21	57 57.5	86.37	43.8	.E.0.P.	-5	P048C			2.60	.21	2.55	
O208	17 19.21	-5.8	34.75	44.2	E		4.6			.071	.071	2.60	
A1720+30	17 20.76	30 55.5	54.18	76.6	.SKR1..	1	M082V			1.09	.18	1.05	
MK506	17 20.76	-5.4	31.50	64.0			2.6			.061	.058	1.09	
I4653	17 22.3	-60 52	330.80	195.7	.S.....		....V						
	17 22.3	-4.8	-14.02	11.4									
I4660	17 23.4	75 54	107.55	32.8	.S.....		P048N			1.16	.54	1.04	
	17 23.4	-5.5	31.69	28.6			1.4			.050	.050	1.08	
A1724+45	17 24.2	45 41	71.55	53.8									
	17 24.2	-5.0	33.61	54.7									
N6368	17 24.8	11 35	34.03	124.7	.S...3..	3	P048N			1.60	.53	1.47	
	17 24.8	-4.8	23.88	68.3			2.2			.039	.038	1.53	
N6372	17 25.5	26 30	49.61	85.0	.S...3SP	3S	P048N			1.28	.16	1.25	
	17 25.5	-4.7	29.24	67.0			2.0			.039	.038	1.29	
I1258	17 26.5	58 33	87.04	42.2	.S...2..	2S	P200C			1.06	.07	1.04	
	17 26.5	-4.7	33.76	44.2			3.2			.039	.038	1.07	
I1259.	17 26.6	58 35	87.08	42.2	.L...PS	-2S	P200C			1.17	.00	1.17	
	17 26.6	-4.7	33.75	44.2			3.5			.050	.050	1.21	
N6381	17 26.63	60 3.3	88.84	41.2	.SAS4S.	4	P048C			1.19	.11	1.17	
	17 26.63	-4.7	33.69	42.9			1.8			.039	.038	1.20	
N6395	17 27.1	71 8	101.98	34.8	.S...6P	6*	P048N			1.42	.46	1.31	
	17 27.1	-4.8	32.40	33.0			2.0			.039	.038	1.34	
N6379	17 28.4	16 19	39.17	111.9	.S...6*	6*	P048N			1.12	.02	1.11	
	17 28.4	-4.2	25.01	69.7			1.8			.039	.038	1.15	
N6384	17 29.98	7 5.8	30.27	137.3	.SKR4..	4	P200V	BS *GK	3	1.78	.15	1.75	1.40
	17 29.98	-4.0	20.77	68.0	S 3	1*	4.8	3 S		.030	.022	1.81	.04
N6389	17 30.5	16 26	39.51	111.6	.S...4..	4	P048N			1.49	.16	1.45	
	17 30.5	-3.9	24.59	70.2			2.4			.039	.038	1.50	
N6412	17 31.37	75 44.3	107.24	32.3	.SAS5..	5	P200V	SB *AF	4	1.37	.05	1.36	1.15
	17 31.37	-4.4	31.24	28.9	S 5	3	4.1	3 S		.035	.024	1.40	.05
I1267	17 38.0	59 25	88.04	39.9	.SB.3..	3	P048N			1.23	.15	1.20	
	17 38.0	-3.1	32.27	44.1			1.9			.039	.038	1.23	
A1739+47	17 39.0	47 46	74.37	48.2									
	17 39.0	-2.8	31.34	54.5									
I4662	17 42.20	-64 37.3	328.56	199.2	.IB.9..	10	R060V		1	1.35	.20	1.30	0.8
	17 42.20	-1.9	-17.85	8.6			2.9			.067	.043	1.34	.1
N6454	17 44.0	55 43	83.72	41.1						1.16	.09	1.13	
	17 44.0	-2.2	31.34	47.8						.075	.100		
I4662A	17 46.67	-64 56.8	328.47	199.7	.S...6*	6*	F040H						
	17 46.67	-1.2	-18.42	8.4									
N6478	17 47.46	51 10.2	78.50	43.4	.SA.4*.	4	P048C			1.29	.40	1.20	
	17 47.46	-1.6	30.41	52.1			1.8			.035	.030	1.23	
N6467	17 48.5	17 33	42.46	107.4	.S.....		P048N			1.43	.16	1.39	
	17 48.5	-1.3	21.08	74.5			2.3			.046	.045	1.45	
A1749+56A	17 49.2	56 41	84.90	39.5						.51	.00	.51	
	17 49.2	-1.4	30.69	47.2						.075	.100		
A1749+56B	17 49.2	56 41	84.90	39.5						.79	.13	.76	
	17 49.2	-1.4	30.69	47.2						.075	.100		
N6482	17 49.73	23 5.0	48.10	87.7	.E.3.*.	-5*	P048C	E2 *K		1.37	.07	1.36	*
	17 49.73	-1.2	22.91	73.4	E 3P		2.2	E3 *K *		.067	.058	1.44	
N6493	17 49.87	61 34.2	90.59	36.8	.SKRS*	5	P048C			1.13	.01	1.13	
	17 49.87	-1.4	30.83	42.7			1.8			.039	.038	1.16	
N6503	17 49.96	70 9.5	100.58	33.1	.SAS6..	6	P200V	SI *AF		1.79	.42	1.69	1.20
	17 49.96	-1.5	30.64	34.6	S 3	5*	4.6	S G *	2 4VS	.027	.019	1.72	.02
I1269	17 50.0	21 35	46.61	92.5	.S...4P*	4*	P048N			1.27	.10	1.24	
	17 50.0	-1.1	22.30	74.0			2.0			.039	.038	1.29	
N6500	17 53.80	18 20.7	43.77	103.8	.SA.2*.	2	P048C			1.39	.11	1.37	
	17 53.80	-6	20.23	75.7			2.2			.045	.045	1.43	
N6501	17 53.87	18 22.8	43.81	103.6	.LA.+S.	-1	P048C			1.31	.04	1.30	0.85
	17 53.87	-6	20.23	75.7			2.2			.050	.058	1.37	.05
N6504	17 54.2	33 12	58.92	61.1	.S.....		P048N			1.39	.61	1.24	
	17 54.2	-6	25.34	68.0			1.7			.039	.038	1.28	
A1755+32	17 55.0	32 38	58.38	61.8	.SBS3..	3	P048N			1.24	.10	1.21	
	17 55.0	-5	25.01	68.5			2.0			.039	.038	1.25	
N6542	17 59.13	61 21.6	90.40	35.5	.S...2S/	2S	P048C			1.19	.49	1.07	
	17 59.13	-0	29.72	43.3			1.5			.039	.038	1.11	
A1759+06	17 59.5	6 58	33.59	148.9	.S...6*	6*	P048N			1.52	.70	1.36	
	17 59.5	-3	14.16	74.3			1.9			.039	.038	1.44	
N6560	18 3.9	46 52	74.18	42.2	.S...PS		P048N			1.13	.16	1.09	
	18 3.9	-8	27.03	57.2			1.7			.039	.038	1.12	
A1805+65	18 5.4	65 54	95.65	32.9									
	18 5.4	-8	29.25	39.1									
N6555	18 5.61	17 35.8	44.24	105.2	.SXTS..	5	W060V			1.33	.09	1.31	
	18 5.61	-1.1	17.36	78.5			2.9		3 5	.033	.028	1.37	
A1805+35	18 5.7	35 33	62.17	52.4	.SBS6..	6	P048N			1.43	.04	1.42	
	18 5.7	-1.1	23.78	67.5			2.4			.039	.038	1.45	

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _C (15)	B _T m.e. (16)	m' _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N _H m.e. (28)	V ₀ ΔV (29)		
N6300	11.4*	11.135		1.11											1140	988	P
I1254	10.72	.14 15.1 .15	14.2	9.87 .39	1.16 .06	.56 .07									0 1 140	-152	
A1712+59A V 89				.32												243	P
A1712+59B V 89				.32												244	P
A1716+48 I2178				.29											8503 0 2 40	8739 236	
A1717+73				.40												244	
N6359		13.5 .15	13.4	.34 13.09 .51	.89 .06				.78						2948 0 1 75	3194 246	
A1717+14												.59 1 .01			1558 1 0 7	1716 158	
A1717-00		17.10 .08	14.6	.81	1.45 .05	0.93 .06	1.50 .05	0.96 .06		3.75 11 8 7	.74 .75				9130 0 1 120	9232 102	P
A1718+49A V 10				.30											7250 0 1 17	7488 238	
N6361				.33												246	P
A1718+49B V 10				.30											7182 0 1 43	7420 238	P
A1719+57				.32												246	
A1720+30		*		.34	*	*									12826 0 1 220	13033 207	
I4653				1.10												-141	
I4660				.41												243	
A1724+45 I2184				.30											10995 0 1 185	11232 237	
N6368				.58												153	
N6372				.39											4746 1 1 13	4945 199	P
I1258 V101				.33											*	249	P
I1259 V101				.33											*	249	P
N6381				.34												249	
N6395				.39												247	
N6379				.52											5963 1 1 20	6134 171	
N6384	12.7 11.73	11.30 .07	13.8 14.7	.70 10.47	0.73 .03	*	0.85 .03	0.39 .05	.53			1.59 1 .01	2.12		1660* 1 3 21	1801 141	PST
N6389				.52												173	
N6412	12.8 12.63	12.35 .09	13.6 13.9	.42 11.88 .35	0.53 .03	*	0.64 .03	-.03 .05	.41						1406 0 1 62	1650 244	PT
I1267				.35											9305 1 1 14	9558 253	
A1739+47 I2191				.32											5793 0 2 40	6039 246	
I4662	11.7 11.70	11.85 .13	11.3 12.9	.86 10.79	0.42 .04	-.32 .05	0.37 .04	-.34 .05	-.17 -.50						315 1 3 11	167 -148	P
N6454				.34						1.89 1 2 0	.555				9120 0 1 50	9374 254	
I4662A				.83						2.00 2 2 2	.81 1.04					-148 7110	
N6478				.34											6857 0 1 50	253	
N6467				.58												188	
A1749+56A I2199				.36									*		5261 0 2 40	5517 256	
A1749+56B I2199				.36											5339 0 2 40	5595 256	
N6482	12.2 12.05	12.15 .05	13.8	.50 11.59 .37	0.90 .02	0.33 .02	*	*	.75 .25						3922 0 1 60	4127 205	
N6493																257 315	
N6503	11.4 11.14	10.905 .05	12.4 13.6	.41 10.15 .52	0.67 .02	0.05 .03	0.73 .02	0.10 .02	-.50 -.07	2.00* 1 1 1	.275 .645	1.93 2 .02	1.455 1.57		62 3 3 7	255 6310	PT
I1269															6109 1 1 9	201	
N6500				.59												194	
N6501		13.35 .09	13.1 14.7	.59	1.01 .05	0.52 .06	1.03 .05	0.57 .06								194	
N6504				.40												232	
A1755+32				.41											4749 1 1 10	4980 231	
N6542				.39												260	
A1759+06				.99												160	
N6560				.37											7036 1 1 16	7293 257	
A1805+65				.41											6215 0 1 30	6475 260	P
N6555				.69												199	
A1805+35				.42												242	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log Ae m.e. (14)
A1807+38	18 7.8 3.37	38 46 1.4	65.67 24.33	47.7 64.9	.S..3..	3	P048N 1.3			1.35 .050	.93 .050	1.13 1.17	
N6570	18 8.84 1.60	14 4.8 1.6	41.24 15.19	123.6 79.3	.SBT9..	9*	W060V 2.7			1.26 .037	.21 .034	1.21 1.26	
N6438	18 9.4 32.57	-85 26 3.7	308.04 -26.52	205.9 -11.2	.RING.A	-5P	C060V 3.1			1.41 .141	.10 .071	1.39 1.48	
N6438A	18 9.9 32.56	-85 26 3.8	308.04 -26.53	205.9 -11.1	.RING.R	10P	C060V 3.1						
N6574	18 9.59 4.56	14 58.2 1.7	42.15 15.40	119.0 79.6	.SXT4..	4*	W100V 3.0	S F	4 D3 S	1.16 .035	.10 .031	1.13 1.20	0.60 .05
N6587	18 11.67 4.40	18 48.6 2.0	46.01 16.54	97.3 79.7	.LX.-S.	-3	P048C 2.3			1.36 .071	.00 .071	1.36 1.46	0.95 .05
N6621.	18 13.16 -4.3	68 20.9 1.9	98.48 28.60	31.3 36.9	.S...3*P	3*	P200C 3.6			1.39 .039	.33 .038	1.31 1.35	
N6615	18 16.26 4.63	13 14.7 2.7	41.25 13.21	130.7 80.9	.SB.0*.	0	P048C 1.7			1.09 .045	.03 .043	1.08 1.19	
N6627	18 20.40 4.53	15 40.4 3.3	43.95 13.34	115.4 82.2	PSBS3..	3	P048C 3.5			1.19 .038	.03 .037	1.18 1.27	*
N6643	18 21.24 -2.85	74 32.7 2.9	105.55 28.17	29.2 30.9	.SAT5..	5	P200V 4.3	S AF	3 S 3VS	1.59 .031	.27 .023	1.53 1.57	1.10 .04
N6632	18 23.0 4.00	27 30 3.6	55.43 17.56	55.7 76.3	.SAT4..	4	P048N 2.3			1.49 .039	.29 .038	1.43 1.48	
I4710	18 23.5 10.33	-67 1 4.1	327.87 -22.65	203.9 15.8	.SB59..	9	C060C 3.5		1	1.62 .077	.13 .048	1.59 1.63	
I4713	18 24.7 10.39	-67 16 4.3	327.65 -22.44	204.0 6.9	.SB.95/	9	S030V 1.6			1.15 .158	.47 .105	1.04 1.08	
A1824+34	18 24.9 3.65	34 18 3.9	62.27 19.65	44.0 70.3									
N6651	18 25.09 -1.48	71 34.3 3.5	102.20 27.76	29.4 33.9	.SAR5..	5	P048C 1.8			1.26 .039	.30 .038	1.19 1.23	
N6654	18 25.23 -2.14	73 9.2 3.5	103.98 27.85	29.1 32.3	PSBS0..	0	W060V 3.2		5 04 S	1.47 .037	.09 .035	1.45 1.51	*
N6635	18 25.35 4.57	14 47.2 4.0	43.65 11.88	123.2 83.3	.L...P*	-2	P048C 1.8			1.12 .051	.03 .054	1.11 1.25	
I4714	18 25.7 10.25	-66 42 4.5	328.27 -22.77	204.0 7.5	.S...S*	6*	S030V 1.5						
A1827+48	18 27.4 2.69	48 13.4 4.2	76.67 23.50	34.5 57.0	.S...6*P	6*	P048N 1.5			1.14 .039	.34 .038	1.06 1.09	
I4717	18 28.9 8.66	-58 0 4.8	337.29 -20.43	203.4 16.2	.S...*/		S030V		3				
I4719	18 29.0 8.50	-56 46 4.8	338.54 -20.03	203.3 17.4	.S...*		S030V						
I4720	18 29.2 8.72	-58 26.9 4.9	336.87 -20.61	203.5 15.8	.SB.5*S	5*	S030V 2.0		1	1.33 .141	.43 .088	1.23 1.29	
A1829+41	18 29.3 7.10	-41 33 4.8	353.33 -14.37	201.5 32.6	.SXS6..	6	P048C 2.6						
I4721	18 30.1 8.73	-58 32 5.0	336.81 -20.75	203.7 15.7	.SB56*.	6	S030V 2.6		4 3VS	1.61 .077	.43 .049	1.51 1.57	
A1830+55	18 30.2 1.98	55 14 4.5	84.25 24.80	31.7 50.2									
N6667	18 30.84 -2.28	67 57.0 4.4	98.19 26.93	29.3 37.6	.SX.2\$P	2	P048C 2.1			1.42 .052	.30 .050	1.35 1.40	
A1831+54	18 31.6 2.07	54 29 4.7	83.49 24.44	31.6 50.9									
N6658	18 31.82 4.23	22 50.9 4.9	51.82 13.88	60.3 81.3	.L....*/	-2	W100V 2.0		4	1.28 .040	.62 .037	1.13 1.23	*
N6661	18 32.51 4.23	22 52.1 5.0	51.90 13.75	59.4 81.3	.SAS0..	0	W100V 3.2		03	1.31 .035	.19 .030	1.63 1.36	0.75 .03
I1291	18 32.6 2.61	49 14 4.9	77.99 22.95	32.6 56.2	.SB58\$.	8\$	P048N 2.2			1.33 .039	.07 .038	1.31 1.34	
A1834+30	18 34.1 3.85	30 47 5.2	59.58 16.56	41.6 74.3	.S..7..	7	P048N 1.7			1.36 .046	.56 .045	1.23 1.27	
A1834+19	18 34.48 4.37	19 41.0 5.3	49.13 12.00	73.1 84.1	.E.0.S.	-5\$	P048N 1.9			1.13 .051	.00 .058	1.63 1.31	
N6690	18 35.37 -1.05	70 29.1 5.0	101.06 26.83	28.5 35.1	.S..7\$/*	7\$	W060V 3.1		1	1.58 .035	.42 .031	1.48 1.51	
A1836+17	18 36.21 4.48	17 9.1 5.6	46.98 10.55	95.3 85.8	.LA.-..	-3	P048C 2.1			1.12 .075	.00 .100	1.12 1.27	*
N6674	18 36.52 4.12	25 19.8 5.6	54.60 13.92	47.5 79.6	.SBR3..	3	W100V 3.8		4	1.62 .034	.23 .030	1.56 1.63	*
N6691	18 38.3 1.96	55 35 5.7	84.92 23.77	29.9 50.0	.SRT4..	4	P048N 2.0			1.24 .039	.02 .038	1.24 1.28	
N6654A	18 40.58 -2.26	73 31.9 5.7	104.51 26.78	27.7 32.1	.SB57P*	7	P048C 2.0			1.43 .039	.48 .038	1.32 1.35	
N6701	18 42.6 1.28	60 37 6.2	90.42 24.40	28.5 45.0	PSBS1..	1	P048N 2.0			1.26 .039	.06 .038	1.24 1.29	
N6684	18 44.05 9.84	-65 13.9 7.1	330.34 -24.19	205.8 9.1	PLBS0..	-2	C060C 3.4		3	1.57 .100	.14 .051	1.54 1.62	1.01 .04
N6702	18 45.51 2.93	45 39.0 6.8	75.04 19.79	29.3 59.9	.E.3.*.	-5*	P048C 2.1			1.33 .066	.12 .058	1.30 1.38	0.95 .05
N6703	18 45.86 2.94	45 29.7 6.8	74.90 19.68	29.2 61.1	.LA.-..	-3	P048C 2.4			1.42 .047	.02 .047	1.42 1.49	0.75 .04
N6684A	18 47.1 9.76	-64 55 7.5	330.76 -24.44	206.1 9.4	.I..9..	10	C060C 1.9						
N6711	18 47.6 2.78	47 36 7.1	77.12 20.09	28.4 58.0	.SB.4P*	4	P048N 1.8		1	1.12 .039	.03 .038	1.12 1.17	
N6699	18 47.8 8.52	-57 23 7.5	338.74 -22.65	206.0 17.0	.SXS3..	3	S030V 2.3		3 S	1.27 .105	.02 .067	1.27 1.34	
N6710	18 48.56 4.06	26 46.7 7.3	57.10 12.06	31.6 78.8	.LA..*.	-1	P048C 2.0		3	1.30 .042	.22 .045	1.24 1.35	*
N6707	18 51.33 8.10	-53 53.0 8.0	342.53 -22.15	206.5 20.5	.S...*.		....V						
N6708	18 51.58 8.09	-53 47.0 8.0	342.64 -22.16	206.5 20.6		-3*							
I4796	18 52.43 8.14	-54 16.8 8.1	342.17 -22.42	206.7 20.1	.SA.0*\$	0\$	S030V 1.9		3	1.22 .183	.35 .129	1.14 1.22	
I4797	18 52.47 8.15	-54 22.3 8.1	342.07 -22.45	206.7 20.0	.E.5...*	-5	S030V 2.3		3	1.45 .112	.32 .058	1.37 1.47	0.80 .05
A1852-54	18 52.88 8.17	-54 36.9 8.2	341.84 -22.58	206.8 19.7	.L...\$.	-2\$	S030V 2.0			1.20 .129	.12 .066	1.17 1.26	0.60 .07

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m_H m_C (15)	B_T m.e. (16)	m_B m_{25} (17)	A_B B_T (18)	$(B-V)_T$ m.e. (19)	$(U-B)_T$ m.e. (20)	$(B-V)_B$ m.e. (21)	$(U-B)_B$ m.e. (22)	$(B-V)_B^0$ $(U-B)_B^0$ (23)	$\log S_R$ $N_L N_H N_A$ (24)	α_+ α_+ (25)	$\log S_H$ $N A_{21}$ (26)	RI HI (27)	V $N_H N_O$ m.e. (28)	V_0 ΔV (29)	
A1807+38				.40											249	
N6570				.82											190	
N6438		12.5		.59										2431	2220	P
N6438A		.3	14.3	11.91										2512*	2301	P
N6574	12.7 13.13	12.85 .04	11.3 13.2	.80 11.95	0.84 .02	0.18 .02	0.87 .02	0.20 .02	.63 .01					2315	2509	
N6587		13.15	13.4	.70	1.07	0.52	1.10	0.56						2315	194	
N6621, 72778=V247		.13	14.8	.43	.05	.06	.04	.04	.79					6273	286	P
N6615		.15	15.1	13.36	.99	.27			.08					0 1 36	6533	
N6627				.90	0.97		*		.73					5206	192	
N6643	12.7 12.29	11.75 .08	14.9 13.9	13.19 .46	.05 0.68	.05	0.73 .03	0.02 .04	.51 -1.17			1.23 1 .01	2.42	0 1 100	5408	PT
N6632				.58										2 2 12	1736	
I4710	12.8			.67											254	
I4713	12.35		15.0	.66											235	P
A1824+34				.50											-147	
I2206				.46										8005*	8255	
N6651														0 2 40	250	
N6654		12.45		.46	0.90		*		.76						259	
72793		.13	14.4	11.90	.04									1806	2063	
N6635		*		1.01	*									0 1 72	257	
I4714				.66										5071	5273	
A1827+48				.43										0 1 61	202	
I4717				.73											-145	S
I4719				.75										4955	5222	
I4720				.73										0 1 105	267	
A1829+41				1.03											-108	S
I4721	12.9 12.55			.72											-103	
A1830+55			14.4	.43										5794	-110	
I2207				.46										0 1 20	5761	
N6667				.44											-33	
A1831+54				.77	1.08		*		.81						-110	
I2208		14.0		12.92	.04				.76					5573	5843	
N6658		.2	13.7	12.92	1.01		1.02	.03						0 1 105	270	
N6661		12.95	13.9	11.97	.03										264	
I1291		.08		.44										8734	9005	
A1834+30				.60										0 2 40	271	
A1834+19		*		.92	*	*				2.25 3 6 4	.71 1.02*			4270	4498	
N6690				.47										0 1 50	228	
A1836+17		*		1.08	*	*				2.86 7 5 5	.67 .87			4312	4541	
N6674		12.85 .13	15.2	.74 11.90	0.80 .05		*		.57					0 2 41	229	
N6691				.45											270	
N6654A				.48										5878	6151	
N6701				.47										1 1 9	273	
N6684	11.7 11.45	11.35 .09	11.9 13.7	.62 10.66	0.90 .04	0.42 .04	0.93 .03	0.45 .03	.74 .29						259	
N6702		13.25 .1	14.6	12.68	1.04 .04	0.50 .06	1.05 .03	0.54 .04	.88 .41					823	688	PT
N6703		12.45 .07	11.7 14.4	.50 11.91	1.01 .03	0.59 .04	1.02 .04	0.65 .04	.87 .49					0 1 150	-135	
N6684A				.62										4725	4997	
N6711				.50										0 2 43	272	
N6699	12.4 12.56		13.7	.66										2318	2590	
N6710		13.75 .13	14.6	.83 12.72	1.00 .04		*		.74					0 2 35	272	
N6707				.68										4664	-133	
N6708				.68										4938	4938	
I4796				.67										1 1 17	274	
I4797	12.2 11.93	12.30 .13	11.8 13.7	.67 11.59	1.03 .05	0.53 .06	1.04 .03	0.57 .06	.86 .39					3473	3373	
A1852-54		12.4 .13	13.4	.66 12.05	0.97 .05	*	0.99 .04	0.63 .06	.78					4556	4802	
														0 1 50	246	
														2719	2636	T
														0 1 23	-83	
														2579	2497	T
														0 1 13	-82	
														3036	2952	T
														0 1 21	-84	
														2582	2497	T
														0 2 25	-85	
														2721	2635	T
														0 1 33	-86	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	(1950) Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D ₀) Log Do (12)	Log Ae m.e. (13)
14798	18 53.6	-62 10	333.88	206.8									
	9.21	8.4	-24.54	12.2									
A1855+37	18 55.90	37 56.5	68.24	25.1									
	3.47	8.3	15.18	67.7									
N6721	18 56.5	-57 51	338.58	207.3	.E.0...	-5	S030V			1.29	.00	1.29	0.85
	8.55	8.7	-23.90	16.5			2.3		3 S	.224	.105	1.39	
I4806	18 57.2	-57 36	338.87	207.4	.L...*	-2*	S030V			1.61	.53	1.49	
	8.51	8.8	-23.93	16.8			2.5		3	.158	.085	1.57	
I4810	18 58.8	-56 14	340.38	207.6	.S...*		....V						
	8.34	9.0	-23.81	18.1									
A1903-61	19 3.53	-61 28.4	334.89	208.1		-2*							
	9.04	9.7	-25.55	12.9									
I4820	19 4.5	-63 32	332.67	208.1	.S...*	5*	S030V			1.27	-.50	1.15	
	9.39	9.9	-26.02	10.8			1.8			.316	.183	1.20	
N6744	19 5.03	-63 56.3	332.23	208.1	.SXR4..	4	S074V		1	2.19	.18	2.15	
	9.46	10.0	-26.15	10.4			3		D3	.028	.019	2.20	
A1906+42	19 6.8	43 0	73.91	21.2	.SBS4*	4*	P048N			1.35	.23	1.29	
	3.17	9.8	15.28	62.5			2.0			.039	.038	1.35	
N6764	19 7.02	50 51.1	22.8	22.8	.SBS3..	3	P048C			1.39	.037	1.34	
	2.54	9.8	18.23	54.7			2.1				.035	1.40	
N6753	19 7.20	-57 8.0	339.70	208.8	RSAR3..	3	S074V			1.40	.05	1.39	
	8.41	10.2	-25.14	17.2			3.3		4VS	.037	.022	1.45	
N6754	19 7.5	-50 44	346.55	209.3	.SBT3..	3	R060V		5	1.34	.30	1.27	
	7.73	10.2	-23.68	23.6			2.7		2 S	.088	.056	1.33	
I4829	19 8.6	-56 38	340.73	209.0	.S...*		S030V						
	8.34	10.4	-25.22	17.7									
I4827	19 8.90	-60 57.2	335.59	208.7		0*							
	8.93	10.5	-26.08	13.3									
N6758	19 9.73	-56 23.7	340.58	209.2	.E.1...	-5	S030V			1.32	.05	1.31	
	8.31	10.5	-25.32	17.9			2.4			.129	.063	1.40	
I4832	19 9.8	-56 43	340.24	209.2	.S...*	5*	S030V			1.32	.59	1.18	
	8.35	10.6	-25.40	17.6			1.8		3 S	.141	.091	1.23	
I4831	19 10.23	-62 22.8	334.05	208.8		1*							
	9.15	10.7	-26.48	11.9									
I4837A	19 11.2	-54 13	342.98	209.6	.S...*/		S030V						
	8.06	10.7	-25.06	20.0					3				
I4837	19 11.20	-54 45.1	342.41	209.6	.SBS6P.	6	C060C		1	1.44	.28	1.37	
	8.11	10.7	-25.17	19.5			2.3		2	.088	.055	1.42	
N6761	19 11.4	-50 45.4	346.70	209.9	.SBR3*	3*	S030V			1.34	.04	1.33	
	7.71	10.7	-24.28	23.5			2.4		3 S	.224	.141	1.39	
I4839	19 11.55	-54 43.0	342.46	209.6	.SBS3..	3	S030V			1.48	.25	1.42	
	8.11	10.8	-25.22	19.5			2.5		3 S	.129	.085	1.48	
I4836	19 11.7	-60 17	336.39	209.2	.SBS6..	6	S030V			1.13	.02	1.13	
	8.81	10.8	-26.31	14.0			2.0			.158	.105	1.17	
I4840	19 11.7	-56 19	340.73	209.0	.S...*		S030V						
	8.29	10.8	-25.57	17.9									
N6769	19 13.95	-60 36.2	336.09	209.4	.SXR3P.	3	R074V			1.39	.16	1.35	0.92
	8.85	11.2	-26.63	13.6			3.2		D4	.061	.033	1.41	.03
N6770	19 14.23	-60 36.2	336.10	209.4	.SXT3P.	3	R074V		3	1.39	.11	1.36	0.96
	8.85	11.2	-26.67	13.6			3.2		4	.073	.038	1.42	.03
N6771	19 14.30	-60 38.0	336.07	209.4	.LBR+*	-1	R074V			1.41	.60	1.27	
	8.85	11.2	-26.68	13.6			2.8		4	.091	.045	1.34	
I4842	19 15.02	-60 44.4	335.96	209.5	.E.5..*	-5*	S030V			1.38	.27	1.32	0.95
	8.86	11.3	-26.79	13.5			2.3			.224	.112	1.41	.06
I4845	19 16.02	-60 28.6	336.28	209.7	.SBR..*	3*	S030V						
	8.82	11.4	-26.87	13.7									
N6780	19 18.77	-55 52.4	341.42	210.6	.SXT5..	5	R060V			1.28	.08	1.26	
	8.20	11.8	-26.45	18.3			2.8		3 S	.091	.057	1.31	
N6782	19 19.63	-60 1.1	336.88	210.2	RLB...*	-1*	S030V		3	1.43	.23	1.38	
	8.73	11.9	-27.24	14.1			2.4		4	.141	.069	1.45	
N6776A	19 20.4	-63 48	332.64	209.8	.S...*/		S030V						
	9.33	12.1	-27.80	10.4									
N6776	19 20.72	-63 57.9	332.46	209.8	.E.2...	-5	S030V			1.28	.04	1.27	0.80
	9.36	12.1	-27.86	10.2			2.3		4	.158	.077	1.35	.09
N6796	19 20.85	61 2.9	22.0	22.0	.S...*/	4*	P048C			1.33	.56	1.20	
	1.38	11.6	20.07	44.3			1.7			.039	.038	1.25	
I4852	19 22.0	-60 28	336.40	210.4	.SA.5*	5	S030V			1.32	.13	1.29	
	8.78	12.2	-27.59	13.7			2.3			.158	.105	1.34	
A1922+63	19 22.0	63 4	94.39	22.3									
	1.05	11.7	20.65	42.3									
I1301	19 25.3	49 39	81.55	17.5	.S...*	6*	P048N			1.15	.13	1.12	
	2.72	12.3	15.07	55.3			1.7			.046	.045	1.17	
I1302	19 29.06	35 40.9	69.09	6.4	.SXS5*	5	P048C			.99	.14	.96	
	3.68	12.8	8.22	68.4			1.4			.039	.038	1.06	
I1303	19 29.69	35 46.4	69.23	6.2	.SA.5*	5	W100V			1.17	.17	1.13	
	3.68	12.9	8.15	68.2			3.0		3 S	.037	.033	1.23	
A1930+54	19 29.9	54 0	85.96	18.1	.S...3P.	3	P048N			1.30	.10	1.28	
	2.33	12.9	16.24	51.0			2.1			.039	.038	1.35	
N6806	19 33.7	-42 26	356.64	215.6	.SXT6..	6	P048C						
	6.99	13.7	-25.94	31.2									
N6808	19 38.5	-70 46	324.78	210.5	.SAR1*	1	S030V		3	1.23	.38	1.14	
	10.83	14.6	-29.81	3.2			1.8		3 S	.129	.082	1.20	
N6810	19 39.4	-58 47	338.58	213.0	.SAS2*	2	C060C			1.58	.52	1.46	
	8.43	14.5	-29.60	15.0			3.0		4	.079	.050	1.51	
N6814	19 39.92	-10 26.6	29.36	231.6	.SXT4..	4	P200V		3	1.50	.02	1.50	1.15
	5.52	14.4	-16.01	61.4	S 4	1	4.4		4VS	.040	.032	1.58	.02
A1940+50	19 40.34	50 30.8	83.44	13.9	.LXS-..	-3	PG48C			1.10	.00	1.10	0.70
	2.71	14.3	13.28	53.8			2.1			.071	.071	1.21	.05
I4889	19 41.32	-54 27.6	343.55	214.2	.E.5...	-5	R060V			1.42	.26	1.36	
	7.92	14.7	-29.42	19.1			2.9			.091	.046	1.44	
N6821	19 41.72	-6 57.3	32.81	235.8	.SBS7*	7	W100V			1.05	.06	1.04	
	5.39	14.6	-14.87	64.4			2.8		1	.105	.067	1.11	
N6822	19 42.12	-14 55.7	25.34	229.1	.IRS9..	10	....V			2.01	.03	2.00	
D209	19 42.61	55 59.3	88.64	16.2	I	8	5.0			.053	.037	2.04	
N6824	19 42.61	55 59.3	88.64	16.2	.SAS3*	3*	W060V		3	1.32	.14	1.29	
	2.18	14.5	15.45	48.5			2.9		4	.042	.036	1.36	
I4892	19 44.1	-70 22	325.21	211.0	.S...*/		S030V						
	10.64	15.3	-30.35	3.5									
A1945-18	19 45.4	-18 13	22.49	228.2	.SB.9*	9*	P048N			1.39	.20	1.35	
	5.80	15.1	-20.45	53.7			2.2			.046	.045	1.39	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _C (15)	B _T m.e. (16)	m' _e m' ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₋ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ΔV (29)			
14798				.61												-120	S	
A1855+37				.63						1.56 1 1 1	.655 1.025				16560 0 1 150	16828 268		
N6721	13.1 12.77	13.10 .09	12.8 14.5	.63	1.06 .04		1.07 .03									-100	T	
I4806				.63												-98		
I4810				.63												-92		
A1903-61				.59											4219 0 1 36	4105 -114	T	
I4820				.58												-123		
N6744	10.6 9.44	9.035 .13	14.4	.58 8.30 .64	*	*									644 0 1 150 4555 1 1 9	519 -125 4833 278	P	
A1906+42				.57												281		
N6753	11.7 11.84 13.1 13.16	11.935 .13	13.7	.60 11.27 .63	*	*				1.205 1 0 3	1.075 1.075		2.325		3103 0 3 28 3257 0 1 50	3009 -94 3194 -63	PT	
N6754				.60												-91		
I4829				.58											4301 0 1 39	4190 -111	T	
I4827				.59											3327 0 1 32	3237 -90	T	
N6758	12.7 12.49		14.0	.59														
I4832				.59												-91		
I4831				.57											4271 0 1 62	4154 -117	T	
I4837A				.60												-79		
I4837	12.9 12.78		14.1	.60											2668 0 1 18	2586 -82	PT	
N6761				.62												-62		
I4839				.60												-81	PT	
I4836				.57												-107		
I4840				.59												-89		
N6769	12.7 12.65	12.58 .08	12.7 14.0	.56 11.86 .04	0.82 .04	0.19 .04	0.89 .03	0.28 .04	.64 .04 .67						3903 0 1 63	3795 -108	PT	
V304			12.88 13.2	.56 0.84 .04			0.92 .03	*							3813 0 2 12	3705 -108	PT	
N6770			14.4	.56												4216 0 2 19	4108 -108	PT
N6771	13.54 .14	14.0 12.56 .06		.56 1.06 .06	1.06 .06	.27 .07			.81 .08						4049 0 1 17	3940 -109	T	
I4842	13.30 .13	13.5 12.68 .56	14.5	.56 1.01 .05	1.02 .06	0.41 .04	1.02 .06	0.45 .06	.85 .31						3823 0 1 28	3716 -107	T	
I4845				.57											3476 0 1 24	3391 -85	T	
N6780	13.2 13.15		14.2	.55											3736 0 1 37	3632 -104	T	
N6782	12.8 12.58		14.0	.55														
N6776A				.54												-121		
N6776	12.8 12.64	12.95 .09	12.4 14.2	.54 12.32 .58	0.96 .05	0.55 .06	0.97 .04	0.60 .06	.78 .46						5696 0 1 37	5574 -122	T	
N6796				.54											4498 0 1 20	4392 -106		
I4852				.58											6120 0 1 80	6399 279		
A1922+63				.69											3985 1 1 9	4271 286		
72880				.73 .06					.41						4575 0 1 50	4852 277		
I1301				.73 .06												277		
I1302	14.0 .15	13.4	1.18 12.68 .86	.73 .06 .86											3862 1 1 9	4149 287		
I1303	15.1 .15	15.4	1.19 1.09 .06	.86 .06											5717 0 1 25	5702 -15		
A1930+54				.68														
N6806				.59														
N6808	13.0 13.41		13.5	.51												-150		
N6810	12.4 12.32		13.8	.51						1.48* 0 1 1	.295 .005				1808 0 1 150	1713 -95		
N6814	12.2 11.90	12.02 .05	13.3 14.3	.88 11.11 .81	0.85 .03	0.22 .05	0.93 .02	0.31 .02	.64 .06 .84						1437 0 1 40	1578 141	PT	
A1940+50		13.95 .08	12.9 14.3	.81 13.03 .51	1.09 .03		1.10 .03			2.48 6 3 2	.60 .85		-2.62		7156 0 1 30	7446 290		
I4889	12.5 12.20		13.6	.51											2491 0 1 20	2418 -73	T	
N6821				.94														
N6822	11.0* 10.20	9.35 .11	14.2	.79 8.53 .74						1.36 1 3 3	1.265 .91*	3.08 1.01	4.67 .34		-56 2 3 6 3386 0 1 30	157 65 121 3675 289	PT	
N6824		12.7 .15	13.8	.74 11.82 .50	.78 .06				.56							-147		
I4892				.72												107		
A1945-18				.72														

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log (D) Log D ₀ (12)	Log Ae m.e. (13)
A1951+57	19 51.6	57 20	90.46	15.2	.SXS4..	4	P048N			1.28	.21	1.23	
	2.09	15.7	14.96	46.9			1.9			.039	.038	1.30	
N6835	19 51.76	-12 41.8	28.52	234.8	.SBS1\$	1\$	W100V			1.43	.56	1.30	
	5.59		-19.69	58.1	E 8		2.1			.045	.035	1.38	
N6836	19 51.88	-12 49.0	28.42	234.7	.SAX.9..	9	W100V			1.09	.02	1.08	
	5.59	16.0	-19.67	58.0			3.0			.051	.041	1.13	
A1954+40	19 54.48	40 18.0	75.62	1.2	.E.1.1.*	-5*	P048C			.63	.00	.63	
	3.50	16.2	6.13	61.9			.8			.075	.100	.90	
A1954+05	19 54.8	5 45	45.91	265.4	.SB.3*.	3	P048N			1.53	.45	1.42	
	4.95	16.3	-11.77	71.8			2.2			.039	.038	1.53	
A1955+40	19 55.09	40 16.5	75.66	1.0	.E.0.*.	-5*	P048C			.56	.00	.56	
	3.51	16.2	6.02	61.9			.7			.075	.100	.83	
A1957+47A	19 57.5	-47 9	352.32	218.9	.SAS4P.		.060V						
	7.21	16.8	-31.01	25.6									
A1957+47B	19 57.5	-47 9	352.32	218.9	.P.....		.060V						
	7.21	16.8	-31.01	25.6									
N6850	19 59.6	-54 59	343.21	216.7	.S....*		S030V						
	7.86	17.1	-32.10	18.0									
N6851	19 59.92	-48 25.0	350.92	218.9	.E.4.*.	-5*	S030V			1.26	.13	1.23	
	7.29	17.1	-31.58	24.2			2.2			.129	.066	1.30	
N6869	20 0.3	66 5	99.05	18.1	.L.....	-2	P048N			1.24	.04	1.24	
	.80	16.7	18.09	38.3			2.0			.051	.058	1.33	
N6854	20 1.8	-54 32	343.76	217.2	.E.2...*	-5	S030V			1.36	.08	1.34	
	7.80	17.3	-32.39	18.3			2.4			.224	.105	1.41	
N6851A	20 2.3	-48 8	351.30	219.4	.S...7*.	7*	S030V			1.41	.27	1.35	
	7.25	17.4	-31.94	24.4			2.3			.224	.129	1.38	
N6851B	20 2.3	-48 8	351.30	219.4	.S....*/		S030V						
	7.25	17.4	-31.94	24.4									
I4943	20 2.9	-48 32	350.85	219.3	.E.0.*.	-5*	S030V			1.15	.00	1.15	
	7.28	17.4	-32.08	24.0			2.1			.224	.129	1.22	
N6861	20 3.70	-48 30.8	350.89	219.5	.LAS-.*.	-3	C060C			1.43	.27	1.37	0.75
	7.27	17.5	-32.21	23.9			3.0			.112	.058	1.44	.04
A2004-29	20 4.6	-29 58	12.03	227.5	.SXS5..	5	P048C			1.11	.04	1.10	
	6.23	17.6	-28.62	41.2			1.8			.061	.058	1.15	
N6861D	20 4.72	-48 21.2	351.10	219.7	.LAS-.*.	-3*	C060C			1.54	.51	1.42	
	7.25	17.7	-32.36	24.0			2.9			.183	.088	1.49	
N6868	20 6.32	-48 31.4	350.93	219.9	.E.2...*	-5	S030V			1.43	.08	1.41	
	7.26	17.9	-32.64	23.8			2.5			1.20	.058	1.48	
N6870	20 6.57	-48 26.2	351.04	220.0	.SAR2..	2	S030V			1.40	.41	1.30	0.80
	7.25	17.9	-32.68	23.9			2.2			.158	.105	1.35	.04
N6861E	20 7.3	-48 48	350.62	220.0	.S....*		S030V						
	7.27	18.0	-32.83	23.5									
N6861F	20 7.6	-48 26	351.06	220.2	.S....*/		S030V						
	7.24	18.0	-32.85	23.8									
N6875A	20 8.3	-46 19	353.58	221.1	.S....*/		S030V						
	7.09	18.1	-32.74	25.7									
A2009+05	20 9.6	5 37	47.68	270.8	.SAR5*.	5	P048C			1.12	.05	1.11	
	4.97	18.1	-15.03	68.6			2.1			.039	.038	1.18	
N6875	20 9.67	-46 18.5	353.62	221.4	.E.6.*.	-5*	S030V			1.39	.29	1.32	
	7.08	18.3	-32.97	25.7			2.3			.120	.060	1.39	
N6878A	20 10.0	-44 59	355.20	221.9	.SXT3..	3	R060V			1.31	.32	1.23	
	6.99	18.3	-32.87	26.9			2.7			.091	.057	1.28	
I4960	20 10.08	-70 41.6	324.56	213.0	.L....*/	-2*	S030V			1.29	.48	1.18	
	10.37	18.5	-32.41	2.6			1.9			.316	.158	1.24	
N6878	20 10.42	-44 40.6	355.57	222.1	.SAS3..	3	R060V			1.22	.12	1.19	
	6.97	18.3	-32.90	27.1			2			.095	.061	1.24	
I4967	20 11.11	-70 43.0	324.52	213.1			2.7						
	10.36	18.6	-32.49	2.6			-5						
A2011-45	20 11.23	-45 44.6	354.33	221.9			-5						
	7.04	18.4	-33.17	26.1									
N6872	20 11.68	-70 55.5	324.27	213.1	.SBS3P.	3	R074V			1.67	.53	1.55	1.05
	10.41	18.7	-32.50	2.4			3.4			.079	.049	1.60	.04
I4970	20 11.70	-70 54.4	324.29	213.1	.LA.-.*.	-3	R074V			1.29	.35	.81	
	10.40	18.7	-32.51	2.4			2.0			.183	.091	.88	
I4972	20 12.5	-71 4	324.09	213.1	.S...4\$	4\$	R074V			1.00	.58	.86	
	10.44	18.8	-32.54	2.2			2.0			.105	.067	.90	
N6876	20 13.08	-71 1.0	324.13	213.2	.E.3...*	-5	R074V			1.38	.13	1.35	
	10.41	18.9	-32.60	2.3			3.2			.100	.049	1.42	
N6877	20 13.35	-71 0.6	324.14	213.2	.E.6...*	-5	R074V			1.16	.30	1.09	0.58
	10.41	18.9	-32.62	2.3			2.6			.158	.077	1.16	.05
N6887	20 13.4	-52 56	345.75	219.4	.SA.4*.	4*	S030V			1.61	.37	1.52	
	7.56	18.7	-34.05	19.3			2.6			.075	.047	1.56	
N6880	20 14.28	-71 1.0	324.11	213.2	.LXS+*.	-1*	R074V			1.33	.50	1.21	
	10.39	19.0	-32.70	2.2			2.7			.120	.059	1.27	
I4981	20 14.5	-71 0	324.13	213.3	.I...P/	10\$	R074V			.95	.53	.83	
	10.39	19.0	-32.72	2.2			1.9			.120	.077	.85	
N6890	20 14.83	-44 57.4	355.35	222.8	.SAT3..	3	S074V			1.17	.10	1.15	
	6.97	18.9	-33.71	26.6			2.8			.043	.028	1.20	
A2015-39	20 15.2	-39 30	1.83	225.3	.SAT7*.	7	P048C						
	6.65	18.9	-32.98	31.6									
N6893	20 17.23	-48 23.7	351.27	221.8	.LXS0..	-2	R074V			1.45	.18	1.41	
	7.18	19.2	-34.44	23.3			3.3			.100	.049	1.47	
N6902A	20 19.7	-44 27	356.08	224.0	.I...\$.	10\$	S030V			1.17	.10	1.15	
	6.91	19.5	-34.51	26.7			1.5			.183	.120	1.18	
N6902B	20 19.8	-44 3	356.56	224.1	.SXS7\$.	7*	S030C			1.23	.02	1.23	
	6.88	19.5	-34.49	27.1			1.7			.158	.095	1.26	
I5000	20 19.90	6 16.2	49.63	275.5	.SBR2..	2	W100V			1.16	.35	1.08	
	4.95	19.4	-16.90	66.7			2.8			.036	.033	1.16	
A2020-44	20 20.55	-44 9.4	356.45	224.2	.SXT1*.	1	S030C			1.39	.37	1.30	
	6.89	19.5	-34.63	26.9			1.7			.141	.073	1.34	
I1317	20 20.71	0 30.2	44.49	243.9	.E.2.*.	-5*	P048C			.96	.06	.95	
	5.13	19.5	-19.99	63.5			1.4			.050	.050	1.05	
N6902	20 21.07	-43 49.0	356.88	224.5	.PSBR1..	1	S030C			1.34	.09	1.32	
	6.86	19.6	-34.69	27.2			1.9			.120	.100	1.37	
N6906	20 21.10	6 16.9	49.80	275.8	.SBR4*.	4	P048C			1.25	.30	1.18	0.75
	4.95	19.5	-17.15	66.4			1.8			.033	.028	.25	.03
N6907	20 22.13	-24 58.3	18.86	235.3	.SBS4..	4	W100V			1.53	.06	1.51	1.05
	5.98	19.7	-30.82	43.9	.SX3	2*	SX3			.034	.027	1.56	.04
A2022+05	20 22.8	5 6	48.97	273.7	.SAS4..	4	P048N			1.34	.23	1.29	
	4.99	19.7	-18.12	65.5			2.0			.046	.045	1.36	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _H N _H N _H (24)	α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI MI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
A1951+57				.78										3563	3852	
N6835	13.0	13.4		.73	.87	.16			.59			1.13		1 1 9	289	
N6836	13.07	.15	14.0	12.20	.06	.07			-.06			1.08	1.37	1581*	1715	S
				.73										1 2 9	134	
A1954+40		14.7		1.71	1.21				.79					4794	134	
A1954+05		.15	12.8	12.92	.06									0 1 77	5082	
				1.11											288	
															210	
A1955+40		16.1		1.75	.97				.54					4708	4997	
A1957-47A		.15	13.9	14.28	.06									0 1 84	289	
A1957-47B				.49										6410	6376	
N6850				.47										0 1 90	-34	
N6851	12.8	*		.48	*	*								6760	6726	
	12.75		13.7											0 1 90	-34	
N6869				.70											-73	
N6854	13.2			.47										3034	2994	T
N6851A	12.76		14.3	.48										0 2 29	-40	
N6851B				.48											281	
I4943				.48											-70	
															-38	
															-38	
															-40	
N6861	12.3	12.10	11.3	.47	1.00	0.57	1.02	0.61	.85					2819	2779	T
A2004-29	12.18	.07	13.4	11.53	.03	.04	.03	.04	.47					0 1 24	-40	
				.53										6986	7040	
N6861D		*		.47	*	*								0 1 25	54	
N6868	12.1	*		.47	*	*								2493	2454	T
N6870	11.87		13.8	.47										0 1 33	-39	
		13.15	12.6	.47	0.91	0.33	0.97	0.41	.71					2763	2724	T
		.08	14.0	12.33	.03	.05	.03	.05	.16					0 2 24	-39	
N6861E				.47										0 1 20	2571	T
N6861F				.47											-39	
N6875A				.47											-41	
A2009+05				.86											-39	
N6875	12.6	*		.47	*	*								5232	-28	
	12.34		13.6											0 1 20	5446	
N6878A				.47										3103	214	T
I4960				.47										0 1 26	3076	
															-27	
N6878	13.1	14.1		.47	.67	.18			.50					3479	-21	T
I4967	13.26	.15	14.7	13.49	.06	.07			.06					0 1 30	3333	T
A2011-45				.46										5845	-146	T
														0 2 23	5826	T
N6872		12.45	13.2	.47	0.86	0.49	0.94	0.55	.63					4112	-19	T
V297		.13	14.3	11.52	.05	.1	.03	.1	.29					3966	3966	T
I4970		14.70		.47	0.82	0.33	*	*	.65					0 1 25	-146	
V297		.08	13.1	14.09	.03	.03			.25					5026	5002	T
I4972				.47										0 1 63	-24	
N6876	12.7	*		.46	*	*	*	*						4701	4554	PT
	12.41		14.0											0 2 42	-147	
N6877		13.85	12.2	.46	1.12	0.51	1.18	0.55	.98					4715	4568	PT
		.09	13.9	13.33	.05	.06	.04	.06	.42					0 1 44	-147	
N6887	12.8			.45											-148	
N6880	12.42		14.4	.46										3951	3803	PT
I4981				.46										0 2 59	-148	
N6890	12.7	13.06		.46	.54				.40					4132	3984	PT
A2015-39	13.08	.10	13.5	12.50	.06									0 1 29	-148	
				.47												
N6893	12.5	*		.45	*	*									-61	
N6902A	12.29		14.0	.45										3929	3782	PT
N6902B				.45										0 1 22	-147	
I5000				.76											-147	
A2020-44	12.3		13.5	.45										2419	2399	T
	12.59													0 1 25	-20	
I1317		14.2		.67	0.83	*			.64					2719	2727	
27 82		.2	13.8	13.47	.05	*								0 1 25	8	
N6902	12.4	12.5		.45	*									3135	3098	PT
	12.48	.15	13.8	11.95										0 1 28	-37	
N6906		13.55	12.8	.75	0.82	0.31	0.97	0.42						2975	-16	
N6907	12.1	12.00	12.7	.49	0.70	0.04	0.73	0.13						2902	2961	
A2022+05	11.83	.08	14.3	.72	.04	.04	.03	.04						0 1 20	-14	
														2902	218	T
														0 1 18	2887	
															-15	
														3975	4172	
														0 1 74	197	
														2682	2669	T
														0 1 25	-13	
															218	
															83	
														4826	5041	
														1 1 13	215	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log (D ₀) Log D ₀ (13)	Log A _e m.e. (14)
N6912	20 24.0 5.75	-18 48 19.9	25.73 -29.13	240.7 48.9	.SB55..	5	P048C 1.9			1.20 .061	.10 .058	1.17 1.21	
N6909	20 24.15 7.06	-47 11.6 20.0	352.82 -35.52	223.5 23.9	.E.6...	-5	S030V 2.2			1.36 .120	.28 .061	1.29 1.36	
A2024+02	20 24.2 5.07	2 32 19.9	46.82 -19.73	268.8 63.9	.S..3..	3	P048N 1.9		3	1.17 .039	.03 .038	1.17 1.24	
N6915	20 25.16 5.25	-3 14.6 20.0	41.55 -22.78	259.1 60.4	.S..25.	25	P048C 1.8			1.09 .224	.00 .129	1.09 1.15	
N6921	20 26.35 4.30	25 33.4 20.1	66.99 -7.56	324.9 66.0	.SAR0..	0	L036V 1.5		3	1.06 .038	.56 .037	.93 1.11	*
I5020	20 27.8 6.32	-33 42 20.4	9.26 -34.33	231.1 35.7	.LA....	-1	P048C 3.1						
N6923	20 28.56 6.20	-31 0.1 20.4	12.47 -33.87	232.9 38.0	.SB53*. S 4	3 35	P048C 2.1			1.39 .061	.25 .058	1.33 1.38	0.90 .04
A2029-02	20 29.7 5.22	-2 24 20.5	42.94 -23.37	261.9 60.0	.SXS4..	4	P048N 2.2			1.30 .046	.01 .045	1.30 1.35	
N6927A	20 30.20 4.85	9 42.8 20.5	54.10 -17.24	285.7 65.5	.E.6*. L....*/	-5* -2*	P048C P048C			.88 .075	.33 .050	.80 1.00	
N6927	20 30.22 4.85	9 44.7 20.6	54.13 -17.22	285.7 65.5			P048C .7		3	.75 .050	.40 .050	.65 .75	
N6928	20 30.42 4.85	9 45.4 20.6	54.16 -17.26	285.8 65.5	.SB52..	2	W100V 3.1		2	1.35 .033	.45 .028	1.25 1.33	0.60 .06
N6926	20 30.5 5.21	-2 11 20.6	43.26 -23.44	262.4 60.0	.SB55P. S 4	5	P048C 2.4			1.33 .039	.17 .038	1.29 1.34	0.95 .04
N6930	20 30.56 4.45	9 42.1 20.6	54.14 -17.32	285.7 65.4	.SB525/ L.A..P*	2	W100V 2.7		3 S	1.16 .035	.39 .031	1.07 1.15	
N6929	20 30.8 5.21	-2 12 20.6	43.28 -23.51	262.5 59.9		-1	PG48C 1.7			.96 .050	.06 .050	.95 1.02	*
N6925	20 31.24 6.24	-32 9.2 20.7	11.28 -34.70	232.8 36.7	.SAS4.. S 4	4 3	W100V 3.6		03	1.61 .047	.41 .036	1.51 1.55	1.02 .04
N6946	20 33.80 2.14	59 59.0 20.8	95.73 11.68	10.0 42.0	.SKT6.. S 5	6 5	W060V 4.4	S AF	4	2.04 .022	.05 .016	2.03 2.12	1.70 .04
N6935	20 34.7 7.35	-52 17 21.2	346.52 -37.28	222.9 18.6	.SKR1.. S 4	1	B060V 2.9		3 S	1.30 .088	.06 .056	1.29 1.34	
N6937	20 35.1 7.35	-52 20 21.2	346.46 -37.34	222.9 18.5	.SKR2.. S 4	2	B060V 3.3		3 S	1.47 .088	.04 .056	1.46 1.50	
N6944A	20 35.73 4.95	6 43.6 21.2	52.22 -26.00	280.2 63.3	.SBT7P* L...*	7 -3*	P048C P048C			1.09 .056	.12 .049	1.39 1.11	
N6944	20 35.94 4.94	6 49.3 21.2	52.33 -19.99	280.4 63.2			1.7		3 S	1.22 .183	.34 .091	1.14 1.23	0.5 .1
N6951	20 36.61 1.28	65 55.9 21.1	100.91 14.85	13.8 36.8	.SXT4.. S 3P	4 2	P200V 4.5	SAP*F *	3	1.58 .033	.06 .025	1.56 1.64	1.20 .02
N6942	20 37.0 7.51	-54 30 21.5	343.71 -37.50	222.2 16.4	.LB... S 4	-3 6	S030V 2.5		3	1.42 .141	.14 .075	1.39 1.45	
N6943	20 39.80 9.45	-68 55.7 21.9	325.96 -35.30	216.1 3.3	.SKR6*. S..7*.	6 7*	S030V 2.7		3 S	1.61 .073	.29 .046	1.54 1.57	
I5039	20 40.19 6.12	-30 2.1 21.7	14.35 -36.07	236.3 37.5	S 3	4*	P048C 1.8			1.39 .061	.53 .058	1.27 1.30	0.90 .04
A2040-26	20 40.77 5.99	-26 44.0 21.8	18.32 -35.35	238.8 40.2									
N6954	20 41.54 5.06	3 1.7 21.8	49.67 -23.19	274.3 60.4	.S..25. S 4	25 4	P048C 1.4			1.03 .038	.22 .037	.98 1.04	
N6956	20 41.6 4.78	12 20 21.8	58.01 -18.11	293.1 63.4	.SB..3..	3	P048N 2.2			1.32 .039	.01 .038	1.31 1.38	
A2044-13	20 44.13 5.53	-13 2.0 22.1	34.06 -31.35	252.1 50.2	.I..9.. S 4	10 9	P048F 2.0			1.32 .061	.25 .058	1.27 1.29	
D210	20 44.75 5.14	0 8.0 22.2	47.41 -25.37	270.1 58.3	.SKR2.. E..1*.	2 -5*	W100V P048C		03	1.48 .035	.09 .031	1.46 1.52	0.90 .06
N6963	20 44.78 5.14	0 17.9 22.2	47.57 -25.29	270.3 58.4			1.3			.84 .042	.00 .045	.84 .92	0.50 .09
N6964	20 44.84 5.14	0 6.8 22.2	47.40 -25.40	270.1 58.3	.E..4P* E..1...	-5 -5	P048C S030V			1.28 .069	.13 .063	1.24 1.32	0.65 .09
N6958	20 45.4 6.44	-38 11.4 22.3	38.60 -38.60	232.1 30.0			2.0		*	1.38 .224	.04 .105	1.37 1.43	
A2047+16	20 47.3 4.66	16 40 22.4	62.55 -16.73	302.9 62.5	.SB..3*. S 4	3*	P048N 2.1			1.35 .039	.19 .038	1.31 1.38	
I5052	20 47.37 9.42	-69 23.5 22.7	325.18 -35.81	216.5 2.6	.SB..7*/ S..0..	7*	C060C 3.1		1	1.76 .066	.82 .042	1.57 1.60	
N6972	20 47.6 4.87	9 43 22.5	56.61 -20.81	288.3 61.4		0	P048N 1.6			1.14 .039	.30 .038	1.07 1.14	
I5063	20 48.2 7.66	-57 16 22.7	339.99 -38.73	222.3 13.3	.LA...*. S 4	-3*	S030V 2.2		3 S	1.28 .158	.11 .082	1.25 1.30	0.85 .05
N6970	20 48.6 7.00	-48 59 22.7	350.62 -39.62	226.6 20.5	.SBT1.. S 4	1	S030V 1.9		3 S	1.08 .112	.05 .071	1.07 1.11	*
N6978	20 50.0 5.31	-5 54 22.8	42.22 -29.48	262.4 53.9						1.27 .075	.28 .100	1.21 1.21	
N6982	20 53.8 7.17	-52 23.2 23.2	346.55 -40.22	225.7 17.4	.S..15. SBR5..	15 5	C060C R060V						
N6984	20 54.3 7.17	-52 4 23.3	346.52 -40.29	225.7 17.3			2.7			1.24 .091	.16 .058	1.20 1.23	
A2058+16	20 58.52 4.70	16 6.5 23.6	63.78 -19.21	302.0 59.8	.E..1*. S 4	-5*	P048C 1.7						
A2058-28	20 58.65 5.98	-28 13.5 23.7	17.78 -39.56	241.7 36.6									
A2058+15	20 58.82 4.70	15 53.9 23.6	63.65 -19.40	301.6 59.7	.S..15. S 4	15 7	P048C 1.7			.69 .061	.25 .058	.63 .70	
I1347	20 59.0 5.52	-13 31 23.7	35.31 -34.85	255.4 47.3						1.12 .075	.10 .100	1.10 1.10	
A2059+15	20 59.60 4.70	15 54.9 23.7	63.78 -19.54	301.7 59.5	.E..1*. S 4	-5*	P048C 1.9						
I5078	20 59.7 5.62	-17 0 23.8	31.44 -36.36	251.9 44.8	.SA..4*. S 4	4*	P048N 2.3			1.61 .039	.50 .038	1.49 1.53	
A2100-48	21 0.13 6.88	-48 25.0 23.9	351.22 -41.55	228.6 20.0		-5							
A2101-48	21 1.33 1.33	-48 24.0 24.0	351.22 -41.75	228.6 19.9		-5							
N7013	21 1.44 4.27	29 41.9 23.9	75.14 -11.14	327.8 57.3	.SAR0.. PSXR4..	0 4	W100V P048C		03	1.69 .039	.44 .038	1.59 1.71	*
A2101-21	21 1.5 5.77	-21 57 24.0	25.77 -38.46	247.6 40.9						1.15 .061	.00 .058	1.15 1.19	

NGC, IC, A Zw, VV (14)	Magnitudes				Color indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _N N _N N ₊ (24)	α ₋ α ₊ (25)	Log S _N N _N A ₂₁ (26)	RI HI (27)	V N _N N ₀ m.e. (28)	V ₀ ΔV (29)	
N6912				.51										7111 1 1 27	7224 113	T
N6909	12.8	*		.43	*	*								2640 0 1 59	2610 -30	
A2024+02	12.55		13.6	.67										5289 0 1 20	5494 205	
N6915				.60												
N6921		*		1.50	*	*	*	*						4317 0 1 40	183 4590 273	P
I5020	13.1			.45											39	
N6923	12.9	12.85	12.8	.46	0.76	0.18	0.86	0.28							53	
A2029-02	12.87	.08	14.0	.58	.03	.03	.03	.03						5949 1 1 9	6136 187	
N6927A				.73										4419 0 1 250	4651 232	P
N6927	15.5	.15	13.1	.73	.99				.75					4277 0 1 50	4509 232	
N6928	13.65	12.1	.73	1.01			1.08		.73					4754 0 1 75	4986 232	
N6926	.09	14.1	12.51	.03	.03		.06									
N6926	13.10	13.3	.58	0.75	0.09	0.85	0.14								188	PST
N6930	.09	14.2	.73	.05	.04	.05	.03		.60					4182 0 1 75	4414 232	
N6929	14.0	.15	13.7	12.92	.06		*	*							188	
N6929	14.6	.1	14.1	.58	1.14	.04	.04							2496*	2544	
N6925	12.1	12.10	12.7	.45	0.80	0.18	0.88	0.26	.61					0 2 108	48	PT
N6925	12.00	.09	14.0	11.31	.04	.04	.04	.04	.02							
N6946	11.1*	9.635	13.6	1.10	0.80	*	0.84	0.35	.54	2.18	.65	2.62*	2.67*	4 1 6	338	
N6935	9.79	.05	14.6	8.49	.04		.03	.05		3 4 4	.65	3 .01	1.53*		292	
N6937	12.9			.41											-55	P
N6937	12.87		14.1	.41											-55	
N6944A				.64												
N6944	14.25	12.2	.64	1.00	0.67	1.03	0.70	.80						4417*	222	
N6944	.13	14.4	13.48	.03	.04	.03	.04	.54						0 2 36	4640 223	PT
N6951	12.4	12.2	13.7	.89	1.10	0.41	1.17	0.51	.88			1.48		1343	1627	
N6942	11.92	.1	14.8	11.25	.03	.04	.02	.02	.19			1 .01	1.62	1 1 49	284	
N6943	12.9		14.1	.41											-66	P
N6943	12.48			.43											-137	
N6943	12.5		14.3													
I5039	12.16	13.25	13.2	.43	0.65	-.13	0.63	-.09							60	
A2040-26	13.16	.09	13.7	.43	.04	.04	.03	.03						12195 0 2 107	12271 76	T
N6954	14.1	.15	13.5	.56	.88				.68					4011 0 1 100	4221 210	
N6956				.68	.06											
A2044-13				.46								.78		-130 1 0 10	241 143	
N6962	12.85	12.8	.52	0.85			1.00		.68			1 .01		4183 0 1 75	4382 199	T
N6962	.13	14.9	12.22	.05	.05		.04							4351 0 1 50	4551 200	
N6963	15.0	13.0	.53	0.92			0.93		.76							
N6963	.1	14.2	14.40	.05	.05		.04									
N6964	13.7	12.4	.52	1.03	*		1.03	0.67	.88					3832 0 1 100	4031 199	T
N6958	12.5	.13	14.8	13.12	.04		.03	.06						2742 0 1 150	2760 18	
A2047+16	12.21		14.0	.72												
I5052	12.3			.42										911 0 1 180	773 -138	T
N6972	12.12		13.7	.60										4447 0 1 57	4681 234	
I5063	13.0	13.05	12.8	.39	1.04	0.34	1.06	0.38	.91	2.28	.85		-1.69	3485 0 1 270	3405 -80	
N6970	12.86	.08	14.0	12.59	.03	.06	.03	.06	.26	6 3 6	1.15			5240*	5203	
N6978	12.7	13.30	.39	0.52	-.04	*	*		.48					0 2 115	-37	P
N6978	13.23	.09	13.4	12.80	.03	.05			-1.10					5874 0 1 50	6049 175	
N6982				.38												
N6984	13.1			.38											-53	
N6984	13.26		13.9												-53	T
A2058+16	*			.63	*									9148 0 1 250	9402 254	
A2058-28	*			.39	*	*								11505*	11575	
A2058+15	16.1	.15	13.8	.62	.68				.40					0 2 107	70	
I1347				.42	.06									11255 0 1 50	11508 253	T
A2059+15				.62						2.11	.87*			8855 0 1 270	8997 142	
I5078				.41						1 1 2	.87*			11965 0 1 50	12218 253	
A2100-48				.38												
A2101-48				.37										5260 0 1 47	126 5226 -34	P
N7013	*			.98	*	*	*	*					1.07	4812 0 1 36	4778 -34	
A2101-21				.39									1 .02	599*	883	
														1 1 27	284	
														8724 0 1 50	8826 102	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	(1950) Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (I) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log(DO) Log Do (13)	Log Ae m.e. (14)
N7007	21 1.9	-52 45	345.43	226.4	.LA.-*	-3*	S030V			1.27	.20	1.22	
A2102-47	7.15	24.1	-41.36	16.2		0*	2.1			.129	.065	1.27	
N7015	21 2.10	-47 14.8	352.76	229.6									
A2103-47	6.80	24.1	-41.96	20.8	.S..4..	4	P048N			1.31	.05	1.30	
N7014	21 3.3	11 13	60.34	292.9		-5	2.1			.039	.038	1.35	
A2105+03	21 4.48	-47 22.8	352.54	229.9	.E+0...	-5	S030V			1.29	.00	1.29	0.85
N7020	6.79	24.3	-42.35	20.4			2.3			.224	.112	1.35	.05
N7029	21 5.2	3 40	53.80	280.0									
A2109-01	5.05	24.3	-27.82	55.3	RLAR+..	-1	R060V			1.63	.26	1.57	
N7042	21 7.3	-64 15	330.95	220.7			3.4		4	.100	.049	1.62	
N7038	21 8.21	-49 29.6	349.60	229.2	.E+6.*	-5*	S074V			1.15	.24	1.09	
I5092	8.45	24.7	-42.81	18.3	.S..3P.	3	P048N		5	.053	.028	1.15	
N7046	21 9.6	-1 40	49.31	272.7			2.6			1.17	.22	1.12	
N7049	21 11.4	13 21	63.49	297.4	.S..3..	3	P048N			.039	.038	1.16	
I5092	8.20	25.1	-39.64	5.4			2.2			.039	.038	1.39	
N7046	21 12.41	2 37.6	53.95	279.6	.SASS*	5	S030V		3VS	1.48	.20	1.43	
N7041	21 13.15	-48 34.2	350.73	230.4	.SMT5*	5*	S030V			.085	.053	1.46	
N7049	6.79	25.2	-43.68	18.6	.SBR6..	6	P048C			1.44	.04	1.43	
N7052	21 15.63	-48 46.4	350.38	230.6	.LX+...	-3	S030V			.129	.085	1.46	
A2117+13	6.78	25.4	-44.06	18.2	.LAS0..	-2	S030V		4	1.30	.11	1.27	
I5101	21 16.35	26 14.1	74.72	320.3			2.6			.11	.037	1.30	
A2119-46	4.44	25.3	-15.90	55.0	.F.4...	-5	P048N			1.59	.41	1.49	0.95
A2120-46	21 17.0	13 51	64.84	298.6	.I..9P3	10*	P048N			.183	.085	1.54	.04
I5105	21 17.9	-66 4	327.82	220.7		5*	1.2			1.45	.11	1.42	0.90
A2119-46	8.30	25.7	-39.68	3.9	.S...*/		S030V			.183	.091	1.47	.05
A2120-46	21 19.5	-46 13	353.83	232.8			2.5		1	1.63	.51	1.51	
I5105	21 20.0	-46 0	354.12	233.0	.SA.4..	4	S030V			.120	.075	1.54	
I5105A	6.59	25.8	-45.12	20.0			2.5						
I5105B	21 21.2	-40 50	1.45	236.7	.E+4...	-5	S030V			1.39	.20	1.34	0.95
N7059	6.35	25.9	-45.64	23.9	.SBR25*	2	P048C			.224	.100	1.39	.06
N7065	21 22.6	-40 29	1.95	237.2	.SBR55*	5	S030C		1	1.34	.26	1.28	
N7065A	6.32	26.0	-45.91	24.0	.SBR35*	3*	S030C			.141	.088	1.31	
A2125-38	21 22.9	-41 3	1.13	236.8	.SBR55*/	5*	S074V			1.32	.48	1.36	
N7064	21 23.58	-60 13.9	334.70	224.6	.SBR25*	2	P048C			.158	.100	1.25	
N7070	21 24.06	-7 12.8	45.71	268.1	.SBR25*	2	P048C		03	1.50	.25	1.44	
N7072A	5.32	26.1	-37.54	46.1	.SBR25*	2	P048C			.043	.028	1.47	
N7072	21 24.32	-7 14.5	45.72	268.1	.SBR25*	2	P048C			1.16	.06	1.15	
A2125-38	5.32	26.1	-37.54	46.1	.SBR25*	2	P048C			.057	.050	1.19	
N7070	21 25.2	-38 5	5.42	239.3	.SBR25*	2	P048C			1.22	.02	1.22	
N7072A	21 25.57	-52 59.1	344.17	229.3	.SBR25*	2	P048C		3VS	.055	.048	1.25	
N7072	6.21	26.2	-46.39	25.5	.SBR25*	2	P048C						
N7070	21 27.3	-43 19	357.80	235.9	.SBR25*	2	P048C			1.61	.77	1.43	
N7072A	6.41	26.4	-46.66	21.2	.SBR25*	2	P048C			.039	.025	1.46	
N7072	21 27.4	-43 22	357.72	235.9	.SBR25*	2	P048C		3 S	1.33	.06	1.32	
N7070	6.42	26.4	-46.66	21.1	.SBR25*	2	P048C			.040	.026	1.35	
N7072	21 27.4	-43 22	357.72	235.9	.SBR25*	2	P048C			.93	.14	.90	
N7070	6.41	26.4	-46.66	21.1	.SBR25*	2	P048C			.129	.082	.93	
N7072	21 27.4	-43 22	357.72	235.9	.SBR25*	2	P048C			.92	.08	.90	
N7070	6.41	26.4	-46.66	21.1	.SBR25*	2	P048C			.120	.079	.92	
N7070A	21 27.8	-43 1	358.20	236.3	.SBR25*	2	P048C		2	1.30	.02	1.30	
N7079	6.47	26.4	-46.66	21.1	.SBR25*	2	P048C			.039	.038	1.36	
N7079	21 29.3	-44 18	356.32	235.5	.SBR25*	2	P048C			.123	.21	1.18	
N7083	6.44	26.6	-46.43	20.3	.SBR25*	2	P048C		4	.105	.067	1.22	
A2131+08	21 31.8	-64 7	329.37	223.0	.SBR25*	2	P048C			1.44	.20	1.39	
N7090	4.95	26.8	-30.34	50.5	.SBR25*	2	P048C			.141	.069	1.44	
N7097	21 32.98	-54 46.9	341.30	229.0	.SBR25*	2	P048C		03 S	1.65	.19	1.61	
N7097	6.98	26.9	-45.38	11.8	.SBR25*	2	P048C			.063	.040	1.64	
N7102	21 37.1	-42 46	358.38	237.7	.SBR25*	2	P048C						
N7096	6.32	27.3	-48.49	20.5	.SBR25*	2	P048C						
N7097A	21 37.25	6 3.6	61.48	288.0	.SBR25*	2	P048C						
N7097	5.01	27.2	-32.88	48.6	.SBR25*	2	P048C						
N7097	21 37.4	-64 8	328.99	223.5	.SBR25*	2	P048C						
N7097	7.73	27.4	-42.36	4.2	.SBR25*	2	P048C						
N7097A	21 37.4	-42 42	358.47	237.8	.SBR25*	2	P048C						
N7107	6.31	27.3	-48.55	20.5	.SBR25*	2	P048C						
N7107	21 39.2	-45 2	354.91	236.4	.SBR25*	2	P048C						
N7109	6.40	27.4	-48.58	18.5	.SBR25*	2	P048C						
N7119A	21 41.9	-75 21	316.31	216.6	.SBR25*	2	P048C						
N7119B	9.74	27.8	-36.80	-4.6	.SBR25*	2	P048C						
N7119B	21 43.1	-46 45	352.16	235.7	.SBR25*	2	P048C						
N7119B	6.44	27.8	-48.95	16.8	.SBR25*	2	P048C						
N7119B	21 43.1	-46 45	352.16	235.7	.SBR25*	2	P048C						
N7119B	6.44	27.8	-48.95	16.8	.SBR25*	2	P048C						
A2143-21	21 43.84	-21 29.1	30.52	256.4	.E.0.5.	-5*	P200V			1.87	.00	1.87	
I5131	5.63	27.8	-47.68	34.0	.LB+...	-3	S074V			.050	.038	1.92	
I1401	21 44.4	-35 7	10.05	244.6			5.0		5	1.20	.04	1.19	
N7124	6.00	27.8	-50.16	25.0	.S..3..	3	P048N			.158	.082	1.24	
I5135	21 44.4	1 28	58.35	282.5			2.9			1.34	.37	1.25	
I5135	5.12	27.8	-37.09	45.4	.SBR4..	4	S074V			.039	.038	1.28	
I5135	21 44.8	-50 48	346.11	233.1			3.1		3 S	1.43	.34	1.35	
I5135	6.62	27.9	-48.25	9.95	.P.....		S074V			.040	.026	1.38	
I5135	21 45.3	-35 11	-50.35	24.8			2.7			1.12	.04	1.11	0.55
I5135	6.00	27.9	-50.35	24.8			2.7			.129	.082	1.15	.06

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _C (15)	B _T m.e. (16)	m' _e m' ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N _H N _O m.e. (28)	V ₀ ΔV (29)		
N7007	12.9			.37													
A2102-47	12.99		13.6	.37											4944 n 1 27	-56 4916 -28	T
N7015				.54												239	
A2103-47				.37											5163 0 1 30	5135 -28	T
N7014	13.2 12.84	13.25 .08	13.0 14.7	.37 12.81	1.00 .03	*	1.01 .03	0.59 .06	.87						4750 0 1 18	4722 -28	T
A2105+03 22102		*		.47	*	*									7700 0 1 105	7914 214	P
N7020	13.1 12.35		14.7	.39												-114	
N7029	12.3 12.71	12.695 .10	12.8	.36 12.29	.88 .06	.25 .07			.77 .19						2818 0 2 24	2779 -39	T
A2109-01				.42											9676 1 1 35	9869 193	
N7042				.52												246	
N7038	12.5			.36											4802	4774	T
I5092	12.36		14.1	.38											0 1 50	-28	
N7046				.44												-116	
N7041	12.2 11.86	12.05 .09	12.3 13.8	.36 11.58	0.94 .03	0.45 .06	0.96 .03	0.49 .06	.82 .36						1877 0 2 30	1843 -34	T
N7049	11.8 11.77	11.80 .08	11.8 13.6	.36 11.36	1.06 .03	0.60 .06	1.07 .03	0.62 .04	.95 .51						2158 0 2 31	2122 -36	PT
N7052				.71						1.48* 1 1 1	.05% .78%				4920 0 1 120	5198 278	
A2117+13				.50												247	
I5101				.38											5166 0 1 20	5044 -122	
A2119-46				.35												-22	
A2120-46	12.9 12.56		14.3	.35												-21	
I5105	13.0 12.61	12.55 .09	12.8 14.0	.35	1.01 .05	0.58 .06	1.03 .03	0.61 .03								5	
I5105A				.35												7	
I5105B				.35												4	
N7059	13.1 12.76	13.165 .14	14.9	.36		*	*									-94	
N7065		*		.37	*	*										170	
N7065A				.37												170	
A2125-38				.34											2567 0 1 25	2586 19	
N7064	12.7 12.70	13.085 .14	14.1	.35												-58	
N7070	12.6 12.57	12.845 .08	14.2	.34	0.55 .04	-.05 .04	*	*								-7	
N7072A				.34												-8	
N7072		14.2 .15	13.4	.34	.28 .06											-8	
N7080				.64											4825 1 1 12	5103 278	
N7070A		13.4 .15	13.9	.34	1.01 .06	.52 .07										-6	
N7079	12.3 12.21	12.5 .15	14.1	.34 12.04	.89 .06	.32 .07			.77 .25						2677* 0 2 75	2664 -13	P
N7083	12.6 12.00		14.6	.37											3049 0 1 35	2936 -113	
A2131+08 22140				.41											8740 0 1 185	8969 229	
N7090	11.8 11.52	11.1 .3	13.5	.34 10.23	*	*									775 0 1 60	708 -67	P
N7097	12.6 12.32	*		.33	*	*										-5	
N7102		13.6 .13	13.8 14.3	.39	0.52 .05	-.13 .05	0.59 .04	-.04 .04								221	
N7096	13.1 12.70		14.5	.36												-114	
N7097A				.33												-5	
N7107	13.1 12.93		14.1	.33												-17	
N7098				.42												-165	
N7119A	13.1 13.82		13.2	.32												-26	
N7119B				.32												-26	
A2143-21		*		.32	*											102	
I5131		13.3 .15	14.1	.32	.94 .06	.40 .07										33	
I1401				.35											4710 1 1 10	4913 203	P
N7124	12.9 12.87	13.175 .14	14.3	.33												-47	
I5135	13.1 13.40	13.00 .06	11.2 13.3	.32 12.58	0.67 .02	0.00 .03	0.70 .03	-.08 .03	.54 -.03						4842 0 2 15	4875 33	P

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (8)	Y type (1) Y type (2) (9)	Byu N BGC N (10)	Log D ₂₅ m.e. (11)	Log R ₂₅ m.e. (12)	Log D ₀ Log D ₀ (13)	Log A _e m.e. (14)
N7125	21 45.62 7.29	-60 56.7 28.0	332.33 -44.64	226.3 6.0	.SXT5..	5	S074V 3.4			1.50 .043	.17 .027	1.46 1.49	
N7126	21 45.65 7.28	-60 50.5 28.0	332.46 -44.69	226.3 6.1	.SAT5..	5	S074V 3.0		3VS	1.36 .044	.31 .028	1.29 1.32	
N7137	21 45.90 4.66	21 55.6 27.9	76.44 -23.74	312.3 48.7	.SXT5..	5	P200V 3.8	S F	4 S	1.19 .035	.04 .030	1.18 1.22	0.9 .1
N7135	21 46.8 5.99	-35 7.9 28.0	10.07 -50.65	245.0 24.6	.LA.-P.	-3	S074V 3.3		03	1.45 .054	.15 .029	1.41 1.46	1.08 .05
N7141	21 48.8 6.86	-55 48 28.2	338.81 -47.15	230.1 9.6	.S...*/		....V						
A2148+25	21 48.8 4.58	25 37 28.1	79.70 -21.51	317.8 47.8	.S...3..	3	P048N 1.9			1.20 .039	.03 .038	1.19 1.24	
N7144	21 49.50 6.46	-48 29.4 28.3	349.19 -49.60	235.3 14.8	.E.0...	-5	S074V 3.6			1.54 .054	.00 .028	1.54 1.59	1.15 .06
N7145	21 50.13 6.44	-48 7.1 28.3	349.71 -49.80	235.6 15.0	.E.0...	-5	S074V 3.3			1.40 .055	.03 .029	1.39 1.44	1.00 .05
N7156	21 52.03 5.09	2 42.4 28.4	61.05 -37.85	285.1 44.0	.SXT6*.	6*	W060V 2.8		3 S	1.23 .035	.04 .032	1.22 1.25	0.70 .05
N7154	21 52.4 5.95	-35 3 28.5	10.22 -51.79	245.9 23.8	.1B.9P*	10	P048C 1.3			1.12 .158	.22 .100	1.07 1.09	
N7155	21 52.93 6.49	-49 45.8 28.5	347.06 -49.79	234.8 13.5	.LBR...	-2	S030V 2.1		3	1.27 .158	.20 .082	1.22 1.26	
A2152-69	21 52.96 8.22	-69 55.7 28.6	321.32 -60.65	220.8 -1.1									
A2153+07	21 53.9 5.01	7 7 28.5	65.65 -35.39	291.2 44.9									
MK516	21 56.43 5.85	-32 7.3 28.8	15.05 -52.50	249.9 25.1	RSX.2*.	2	P048C 1.9			1.25 .056	.17 .048	1.21 1.24	
N7163	21 56.7 6.20	-43 33 28.8	356.37 -51.92	239.8 17.4	.SAS5..	5	S074V 3.0		1	1.44 .043	.41 .028	1.34 1.37	
N7166	21 57.6 6.20	-43 39 28.9	356.17 -52.06	239.9 17.2	.LA.-...	-3	S074V 2.9		5	1.38 .051	.45 .026	1.27 1.35	0.65 .07
I1417	21 57.66 5.41	-13 23.3 28.8	43.52 -47.72	266.8 35.8	.S...3*/	3*	P048C 1.4			1.15 .052	.50 .043	1.03 1.06	
N7162A	21 57.7 6.19	-43 23 28.9	356.59 -52.12	240.1 17.4	.SXS9..	9	S074V 3.3			1.38 .043	.05 .028	1.37 1.39	
A2158+10.	21 58.2 4.95	10 19 28.9	69.40 -34.02	295.9 44.6						1.08 .042	.20 .045	1.03 1.08	
MK520	21 58.30 4.80	17 29.9 28.9	75.37 -28.96	306.0 45.6						1.52 .030	.16 .024	1.48 1.52	0.90 .02
N7177	21 58.34 5.41	-13 30.6 28.9	43.47 -47.93	266.8 35.6	.SRT3...	3	P200V 4.1	S P G	3	1.44 .040	.20 .029	1.39 1.42	1.02 .03
N7168	21 58.88 6.54	-51 59.0 29.0	343.33 -49.95	233.8 11.3	.E.3...	-5	S074V 3.1	S F	3 S	1.30 .100	.09 .051	1.28 1.33	
N7172	21 59.12 5.83	-32 6.6 29.0	15.14 -53.07	249.4 24.7	.S.2P*/	2	P048C 2.0		03	1.34 .037	.22 .034	1.29 1.32	0.99 .03
N7173	21 59.15 5.83	-32 13.0 29.0	14.96 -53.08	249.3 24.6	.E.2*.	-5*	P048C 1.7			1.10 .071	.04 .071	1.09 1.14	0.57 .05
N7174	21 59.20 5.83	-32 13.9 29.0	14.94 -53.09	249.3 24.6	.S.3P*/	3	P048C 1.5			1.11 .056	.29 .049	1.04 1.07	
N7176	21 59.23 5.83	-32 13.8 29.0	14.94 -53.10	249.3 24.6	.E.0.P*	-5	P048C 1.8			1.10 .071	.00 .071	1.10 1.15	0.50 .05
N7180	21 59.54 5.56	-20 47.4 29.0	43.26 -50.95	259.6 31.5	.S...0S.	0S	P048C 1.8			1.25 .060	.29 .049	1.18 1.22	0.60 .07
I5152	21 59.6 6.51	-51 32 29.0	343.92 -50.22	234.3 11.5	.IAS9..	10	R074V 3.6			1.65 .055	.22 .035	1.60 1.62	
N7184	21 59.89 5.57	-21 3.3 29.0	32.90 -51.11	259.4 31.2	.SBR5..	5	W100V 4			1.76 .029	.50 .023	1.64 1.67	
I5156	22 0.4 5.88	-34 2 29.0	11.95 -53.42	247.9 23.2	.SBS1..	1	P048B	SD G	4 S				
N7179	22 1.13 7.35	-44 17.3 29.1	327.01 -44.51	225.3 2.4	.S...4..	4	E040H 2.1		3 S	1.26 .158	.42 .079	1.16 1.19	
N7196	22 2.77 6.42	-50 22.0 29.2	345.37 -51.09	235.5 12.0	.E.3...	-5	S030V 2.2			1.28 .129	.12 .066	1.25 1.30	0.75 .05
N7192	22 3.15 7.34	-64 33.6 29.3	326.53 -44.54	225.2 2.0	.E.0...	-5	S030V 2.5		4	1.39 .141	.00 .071	1.39 1.44	
N7191	22 3.17 7.37	-64 52.7 29.3	326.16 -44.36	225.0 1.8	.S...6*.	6*	E040H						
N7201	22 3.65 5.79	-31 30.4 29.3	16.27 -53.98	250.5 24.3	.S...2*.	2*	P048C 1.6			1.23 .061	.39 .058	1.14 1.17	
N7203	22 3.85 5.79	-31 24.5 29.3	16.44 -53.02	250.6 24.3	.SRT0*.	0	P048C 2.0			1.27 .061	.09 .058	1.25 1.29	
N7200	22 3.97 6.40	-50 14.6 29.3	345.44 -51.32	235.7 11.9	.E.4*.	-5*	S030V 1.9			1.21 .224	.25 .112	1.15 1.20	
N7204	22 4.02 5.79	-31 17.7 29.3	16.64 -54.04	250.8 24.4	.I...*P	0*	P048C						
N7205A	22 4.13 6.79	-57 42.5 29.3	334.91 -48.23	230.2 6.7	.SXS7*.	7	S074V 2.5			1.01 .129	.07 .082	.99 1.01	
A2204+47	22 4.3 4.01	47 0 29.3	96.12 -6.85	345.7 39.6	.S...P.		P048N 2.0			1.50 .039	.57 .038	1.36 1.48	
N7199	22 4.80 7.35	-44 57.1 29.4	325.93 -44.46	225.1 1.6	.SR.1..	1	E040H 2.2			1.10 .183	.06 .095	1.09 1.13	
N7205	22 5.1 6.78	-57 40 29.4	334.87 -48.36	230.4 6.7	.SAS4..	4	S074V 3.5		03 S	1.63 .065	.28 .040	1.56 1.59	
N7217	22 5.61 4.52	31 7.0 29.4	86.51 -19.70	325.0 43.5	RSAR2..	2	P200V 4.5	SNP*GK	04	1.37 .029	.07 .021	1.55 1.61	1.10 .02
A2205+04	22 5.7 5.07	4 27 29.4	65.56 -39.35	288.8 41.3	.S...P.	9S	P048N 1.8			1.16 .039	.14 .038	1.13 1.15	
I5168	22 5.92 5.70	-28 6.1 29.4	22.12 -54.08	253.8 26.0	.S...3./	3	P048C 1.6			1.21 .056	.43 .048	1.11 1.14	
A2206+40	22 6.1 4.24	40 56 29.4	92.76 -11.93	338.0 41.3	.SX.4..	4	P048N 1.9			1.26 .039	.17 .038	1.22 1.29	
N7213	22 6.20 6.26	-47 25.0 29.5	349.58 -52.59	238.1 13.6	.SAS1*.	1	R074V 3.1		5	1.27 .129	.02 .079	1.27 1.30	0.80 .03
N7214	22 6.29 5.70	-28 3.3 29.4	22.22 -54.16	253.9 26.0	.SXT5P.	5	P048C 2.0			1.27 .056	.10 .048	1.25 1.27	0.78 .04
A2206+48	22 6.5 3.98	48 12 29.4	97.13 -6.09	346.9 38.8	.SX.0*.	0	P048N 2.3			1.43 .039	.17 .038	1.39 1.55	
A2207+17	22 7.2 4.83	17 25 29.5	77.11 -30.46	306.1 43.5									

NGC, IC, A ZW, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m' ₂₈ m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N7125	13.2	12.845		.34											3012	2913
N7126	12.73	.14	14.8	12.35											0 1 35	-99
	13.2	13.365		.34												
N7137	13.19	.16	14.2													-98
	13.1	13.05	13.0	.48	0.68	0.04	0.70	0.02	.55				*		1404	1670
N7135	13.24	.1	13.7	12.53	.02	.04	.02	.03	-.05						0 1 72	266
	13.0	12.695	13.6	.32	1.01	0.52	1.02	0.47	.91						2718	2751
N7141	12.51	.07	14.4	12.30	.04	.1	.03	.1	.45						0 1 30	33
				.33												
A2148+25				.52												-73
															5679	5953
N7144	12.2	11.625	12.9	.32	0.91	0.64	0.92	0.68	.82						1 1 9	274
	11.60	.10	14.3	11.27	.05	.06	.05	.06	.58						2098	2062
N7145	12.7	12.085	12.6	.32	0.85	0.24	0.90	0.29	.76						0 1 150	-36
	12.29	.08	14.0	11.73	.05	.06	.05	.06	.18						0 2 17	1840
N7156		13.7	12.7	.34	0.66	0.10	0.70	0.13	.55						3971	4178
N7154		.13	14.6	13.31	.04	.04	.04	.04	.02						0 1 60	207
				.31												32
N7155	12.8			.32											1853	1810
	12.93		13.6												0 1 33	-43
A2152-69		*		.38	*	*				3.51	.71*				8225	8083
										1 1 2	.71				0 1 270	-142
A2153+07				.36											9150	9372
															0 1 200	222
N7163		14.6		.31	1.16	.01										47
		.15	15.3		.06	.07										
N7162	13.1	13.375		.31												-11
	13.06	.14	14.4													
N7166	12.6	12.825	11.6	.31	0.98	0.51	0.99	0.55								P
	12.63	.10	13.5	.30	.04	.04	.04	.04								-12
I1417				.30												138
N7162A		13.085		.31												-10
		.14	14.7												8400	8632
A2158+10.				.36											0 1 200	232
															1188	1441
N7177	12.1	11.95	11.9	.41	0.78	0.20	0.89	0.30	.65			.98			1 1 17	253
	11.96	.04	14.0	11.40	.02	.02	.02	.02	.10			1 .01	2.72			PS
N7171	12.8	13.00	13.6	.30	0.72	0.02	0.81	0.15	.60						2632	2770
	12.64	.08	14.5	12.52	.03	.04	.03	.03	-.07						0 1 50	138
N7168	12.7			.31											2747	2692
	12.57		13.8												0 2 30	-55
N7172		12.82	13.3	.30	0.92	0.42	1.04	0.50	.79						2651	2698
		.07	13.8	.30	.03	.03	.03	.03	.31						0 2 40	47
N7173		13.05	11.4	.30	0.96	0.50	0.99	0.54	.87						2501	2547
		.06	13.4	12.71	.02	.03	.02	.03	.44						0 1 39	46
N7174		13.5	.30		.90	.45			.76						2778	2824
		.15	13.2	12.95	.06	.07			.32						0 2 29	46
N7176	12.9	10.9	.30		0.99	0.45	1.00	0.50	.90						2525	2571
	.13	13.4	12.56	.30	.04	.06	.04	.06	.39						0 1 29	46
N7180	13.40	11.9	.30		0.88	0.37	0.90	0.42								103
	.09	13.8		.31	.04	.04	.04	.04							83	30
I5152	12.3*														0 2 38	-53
	11.68		14.2		*	*										
N7184	12.0	*		.30	*	*										102
	11.67		14.1													37
I5156	13.2			.30												
N7179				.34												
N7196	12.3	12.55	11.8	.31	1.01		1.02		.91							-116
	12.37	.09	13.6	12.19	.05		.05								3007	2960
N7192	12.9			.34											0 2 41	-47
	12.41		14.4													-117
N7191				.35												-119
N7201				.30												49
N7203				.30												49
N7200				.31											2897	2850
															0 1 13	-47
N7204				.30											2630	2680
															0 1 90	50
N7205A				.32												-84
A2204+47			1.23													296
				.35												-119
N7199				.32											1467	1383
	11.7		13.9												0 1 150	-84
N7217	11.57		12.1	.54	0.90	0.39	0.97	0.48	.76				*		946	1227
	11.6	11.10	13.6	10.49	.02	.04	.02	.02	.27						0 2 16	281
A2205+04	11.42	.05		.33												211
																66
I5168				.30												296
																8232
A2206+40				.80											5338	5631
															1 1 13	293
N7213	11.8	11.35	10.8	.30	0.90	0.39	0.91	0.43	.81						1769	1737
	12.16	.07	12.5	11.01	.02	.04	.02	.04	.33						0 2 21	-32
N7214		13.0	12.4	.29	0.58	-.25	0.59	-.22								66
		.13	13.9		.05	.05	.04	.04								296
A2206+48			1.33												7980*	8232
				.39											0 2 39	252
A2207+17																
Z2168																

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D ₀) Log D ₀ (12)	Log A _e m.e. (13)
A2207-19 0211 N7218	22 7.47 5.50 22 7.49	-19 6.8 29.5 -16 54.6	36.79 -52.16 40.11	262.5 30.8 264.7	.J..9* SBT6.. S 5	10* 9* 6	P048N 1.7 W060V	S A	2	1.27 .046 1.40	.41 .045 .28	1.17 1.18 1.33	0.85 .04
A2207-22	22 7.79	-22 54.2	30.87	258.9	.SXR4.. S 5	4	P048C 2.1			1.28 .061	.02 .058	1.28 1.31	
A2207-46	22 7.83	-46 20.4	35.15	239.1		35							
N7221	22 8.4 5.75	-30 52 29.6	17.50 -54.94	251.8 23.9						1.34 .075	.05 .100	1.33	
A2209-00	22 9.3	-0 8	61.67	283.4	.SBS4.. RSAR0P.	4 0	P048C R060V			1.08 .061	.17 .058	1.04 1.07	
N7219	22 9.48	-65 5.7	325.36	225.3					5	1.38 .112	.17 .073	1.34 1.38	
A2209+46	22 9.6	46 4	96.32	344.1	.SX55.. S 5	5	P048N 1.7			1.11 .039	.10 .038	1.08 1.17	
I5181	22 10.30	-46 16.4	351.05	239.4	.LA.../ S 5	-2	S074V 3.0		5	1.45 .047	.46 .024	1.34 1.38	
N7232A	22 10.6 6.17	-46 2 29.7	351.41 -53.72	239.7 13.9	.SBT2./	2	S074V 2.6		2	1.37 .041	.70 .047	1.21 1.24	
N7229	22 11.2	-29 40	19.69	253.2						1.25 .075	.03 .100	1.24	
N7236	22 12.31	13 36.1	75.15	301.2	.LA...- S 5	-3	P200C 3.1			1.01 .075	.00 .100	1.01 1.06	0.55 .04
N7237	22 12.34	13 35.5	301.2	41.8	.LA...- S 5	-3	P200C 3.1			1.01 .075	.00 .100	1.01 1.06	0.62 .04
N7232	22 12.58	-46 6.0	351.13	239.8	.SBT1*. S 5	1*	R060V 2.8			1.48 .105	.54 .067	1.35 1.38	
N7233	22 12.77	-46 6.0	351.11	239.9	.SX50.. S 5	0	R060V 2.8		4 S	1.34 .105	.22 .077	1.29 1.33	
N7232B	22 12.9	-45 56	351.37	240.0	.SBS9.. S 5	9	R060V 2.8			1.28 .105	.09 .067	1.26 1.28	
I1441	22 13.14	37 3.1	91.56	332.6	.SB.15. S 5	1	P048C 1.2			.96 .039	.34 .038	.88 .95	
N7240	22 13.19	37 2.0	91.55	332.5	.L...-* S 5	-3*	P048C 1.3			.88 .041	.00 .043	.88 .97	0.47 .06
I5179	22 13.3	-37 5	6.53	247.2	.SAT4.. S 5	4	S074V 3.0		3VS	1.36 .105	.27 .066	1.30 1.33	
N7241	22 13.4 4.81	18 59 29.9	79.59 -30.24	308.4 42.1	.SBS4SP S 5	4*	P048C 2.2			1.55 .039	.44 .038	1.44 1.48	
N7242	22 13.47	37 3.1	91.61	332.6	.LAR0*. S 5	-2	P048C 2.3			1.42 .071	.12 .071	1.39 1.47	1.05 .04
A2213+22	22 13.8	22 41	82.36	313.4									
N7244 MK303	22 14.02	16 13.2	77.61	304.7						.87 .075	.25 .100	.81	
A2214-21 D212	22 14.10	-21 30.0	33.86	261.1	.J..9* I	10* 8*	P048N 1.9			1.35 .039	.40 .038	1.25 1.26	
N7248	22 14.73	40 15.2	93.72	336.6	.LA...- S 5	-3	P048C 1.9			1.32 .049	.29 .047	1.25 1.35	
I5186	22 15.8	-37 3	6.50	247.5	.SB.35. S 5	3	P048C 1.6			1.32 .141	.34 .088	1.24 1.27	
N7252	22 17.96	-24 55.9	28.44	258.4	RLAR0*. E T	-2*	W100V 3.4	P *K *	5	1.34 .063	.08 .053	1.32 1.36	0.70 .05
I5201	22 18.3	-46 19	350.24	240.3	.SBT6.. S 5	6	S074V 4.1			1.93 .036	.30 .023	1.86 1.88	
A2218+47	22 18.3	47 27	98.35	345.2	.S...6*. S 5	6*	P048N 1.9			1.31 .039	.25 .038	1.29 1.33	
A2218+33	22 18.6	33 3	90.08	327.1						1.40 .042	.82 .045	1.21	
N7263	22 19.6	36 6	92.10	331.0						.92 .042	.05 .045	.91	
N7259	22 20.3	-29 14	20.85	254.9									
A2220+30A	22 20.8	30 40	89.02	323.9						.48 .050	.09 .050	.46	
A2220+30B	22 20.8	30 40	89.02	323.9						.39 .050	.11 .050	.36	
N7274	22 22.0	35 53	92.39	330.6	.E.0... S 5	-5	P048N 2.1			1.25 .071	.00 .071	1.25 1.34	
A2222+38.	22 22.7	38 35	94.07	334.0	.S...P. S 5		P048C 2.2						
N7280	22 24.03	15 53.6	79.55	304.7	.LXR0.. S 5	-2	P048C 2.2			1.38 .041	.16 .041	1.34 1.39	
N7290	22 26.01	16 53.5	80.75	306.0	.SAR4.. S 5	4	W100V 3.1		3 S	1.26 .036	.20 .033	1.22 1.25	
N7292	22 26.1	30 3	89.66	323.0	.IB.9.. S 5	10	P048N 2.1			1.33 .039	.09 .038	1.31 1.33	
A2227+36	22 27.7	36 28	93.74	331.1	.S...1.. S 5	1	P048N 1.9			1.26 .039	.18 .038	1.22 1.28	
A2228-00	22 28.0	-0 23	65.66	285.1									
N7298	22 28.17	-14 26.8	47.34	270.0	.SASS*. S 5	5	W100V 3.1		3 S	1.18 .053	.05 .043	1.17 1.19	
A2228+33	22 28.3	33 34	92.18	327.5	.IB.9.. S 5	10	P048N 2.2			1.31 .050	.00 .050	1.31 1.34	
N7300	22 28.33	-14 15.7	47.65	270.2	.SXT3*. S 5	3	W100V 3.2		3 S	1.34 .048	.27 .038	1.28 1.31	
A2229+39	22 29.10	39 6.2	95.46	334.4	.L...-* S 5	-3*	P048N 1.9			1.14 .071	.00 .071	1.14 1.23	0.70 .03
A2229+19 MK306	22 29.44	19 26.1	83.38	309.4	.S...P. S 5		P048N 1.5			1.08 .039	.19 .038	1.04 1.08	
N7302	22 29.73	-14 22.7	47.75	270.2	.LAS-*. E 3	-3	W100V 3.2		4VS	1.29 .063	.16 .052	1.25 1.29	0.7 .1
N2573A	22 30.0	-89 26	303.37	207.2	.S...*. S 5		S030V 1.9						
N2573B	22 30.0	-89 26	303.37	207.2									
N7307	22 30.9	-41 12	357.92	245.9	.SX55*P S 5	5*	S030C 1.9		2	1.62 .088	.62 .055	1.47 1.49	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities			Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) ₀ m.e. (21)	(U-B) ₀ m.e. (22)	(B-V) ₀ (U-B) ₀ (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
A2207-19				.29											1730	1840	
N7218	12.7 12.72	12.55 .09	12.3 13.7	.29 12.03 .29	0.49 .04	-.15 .04	0.54 .04	-.11 .04	.36 -.24						1 0 70 1662 2 1 9	110 1782 120	S
A2207-22														1.84			
A2207-46				.30											2692	2665	T
N7221				.29											0 1 34	-27	
																51	
A2209-00				.31											10022	10215	
N7219				.34											0 1 30	193	
A2209+46				1.07											5472	5767	
I5181	12.6 12.58	12.615 .10	13.6 13.925	.30 12.09 .30	.92 .06				.79						0 1 30 2070 0 1 35	295 2043 -27	T
N7232A			13.9	.30													-26
N7229				.29												57	
N7236		14.55	12.8	.35	1.04	0.49	1.05	0.52	.89	*					7858	8098	P
Z2172		.07	14.5	14.08	.03	.06	.03	.04	.45						0 2 21	240	
N7237		14.80	13.4	.35	1.07	0.49	1.08	0.55	.92	2.57+	.85		-4.175		7853	8093	P
Z2172		.07	14.7	14.33	.05	.06	.03	.04	.45	18 8 8	1.60				0 2 21	240	T
N7232	13.0 12.96	*		.30	*	*	*	*	*						2010 0 2 59	1983 -27	T
N7233			13.9												1841 0 1 7	1814 -27	T
N7232B				.30													-26
I1441				.63												288	
N7240		14.9	12.7	.63	1.06		1.08		.86						5984	6272	
I5179	12.5 12.69	.1 12.5	14.2 14.18	.29 14.18	.05 .61	.17 .07	.04								0 1 75	288	
N7241		.15	13.5	.39	.06											19	
Z2174																254	
N7242		13.15	13.9	.63	1.12	0.71	1.14	0.75	.91						5684	5972	
A2213+22		.09	14.8	12.39 .41	.05	.06	.02	.03	.57						0 1 100	288	
42 93															3885	4148	
N7244		15.2		.37	.78	.28									0 1 150	263	
		.15			.06	.07									7445 0 1 220	7692 247	
A2214-21				.28								.85 1 .02			2600	2697	
N7248				.72											1 0 25	97	
																291	
I5186				.29												18	
N7252	13.0 12.78	12.73 .07	11.7 14.1	.28 12.35	0.64 .02	0.18 .03	0.69 .03	0.20 .03	.52 .15						4733 0 1 65	4812 79	P
I5201	12.8 11.73	11.315 .14	15.1	.29 10.77 1.08											2112 0 1 35	2083 -29	
A2218+47															5472 1 1 10	5766 294	
A2218+33				.53												282	
N7263				.58											6168	6454	
42 97															0 1 150	286	
N7259				.28												57	
A2220+30A				.48											6702	6980	
ZCG															0 1 150	278	
A2220+30B				.48											6717	6995	
ZCG															0 1 150	278	
N7274				.57											5826 0 1 120	6111 285	
A2222+38.				.63											8837	9125	
42 99															0 1 150	288	
N7280				.35											1817 0 1 80	2060 243	
N7290				.35												246	
N7292				.46											959	1234	S
A2227+36				.56											0 1 105	275	
																284	
A2228-00				.28											1550	1737	
N7298				.27											0 1 34	187	
															5039	5166	
A2228+33				.50											1 1 9	127	
												1.08 1 .01			083 1 0 8	1163 280	
N7300	13.2 13.19	13.7 .15	14.6 13.2	.27 .61	.76 1.0	.30 .07										127	
A2229+39		14.25 .08	14.8	13.56	.1		1.0 .1		.81	2.56 8 6 2	.59 .84*		-3.35		5130 0 1 40	5417 287	
A2229+19				.36											5637	5889	
															0 2 43	252	
N7302	13.1 12.94	13.2 .2	12.2 14.1	.27 12.86 .56	1.07 .03	0.49 .03	1.09 .03	0.53 .03	.98 .43						2586 0 1 65	2712 126	
N2573A																	-221
N2573B				.56													-221
N7307	13.1 12.84		14.2	.28													-5

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	(S)T W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log D ₀ (12)	Log A _e m.e. (13)
N7309	22 31.70	-10 37.0	53.76	274.4	.SXT5..	5	P200C			1.33	.02	1.33	0.90
A2231+32	5.30	31.0	-53.65	29.8	S 5	3	3.8		4	.044	.034	1.35	.05
D213	22 31.88	32 36.0	92.29	326.1	.S..9..	9	P048N			1.45	.07	1.43	
N7313	4.63	31.0	-21.72	37.8	S	9	2.4			.052	.050	1.46	
N7314	22 32.78	-26 21.7	27.02	259.1	.SBS3S.	3	P200V						
N7316	5.54	31.0	-59.70	22.0									
MK307	22 33.00	-26 18.5	27.14	259.2	.SXT4..	4	P200V	S AF	3ES	1.66	.30	1.59	1.20
N7317	5.54	31.0	-59.74	22.0	S 5 K -	2	4.4			.032	.022	1.61	.05
N7318	22 33.52	20 3.9	84.74	310.3	.S.....		P048N			1.12	.09	1.09	
N7318A	4.86	31.0	-32.31	37.5			1.7			.039	.038	1.13	
N7318B	22 33.57	33 41.2	93.24	327.5	.E.2...	-5	P200C			.98	.08	.96	0.70
N7318C	4.62	31.0	-20.99	37.4			3.0			.040	.038	1.04	.05
N7318D	22 33.66	33 42.4	93.27	327.5						1.24	.14	1.21	
N7318E	4.62	31.1	-20.98	37.3						.050	.050		
N7318F	22 33.65	33 42.4	93.26	327.5	.E.2.P.	-5	P200C			.98	.00	.98	0.65
N7318G	4.62	31.1	-20.98	37.3			3.1			.069	.067	1.06	.05
N7318H	22 33.68	33 42.4	93.27	327.5	.SBS4P.	4	P200C			1.28	.17	1.24	1.0
N7320	4.62	31.1	-20.99	37.3			3.5			.048	.040	1.29	.1
N7320	22 33.76	33 43.0	93.27	327.5	.SAS7..	7	P200C			1.34	.26	1.27	1.00
N7320	4.62	31.1	-21.01	37.3			3.5			.032	.026	1.30	.04
N7319	22 33.77	33 43.0	93.29	327.5	.SBS4P.	4	P200C			1.24	.11	1.21	0.90
A2233+03	4.62	31.1	-20.99	37.3			3.5			.034	.030	1.26	.04
D214	22 33.98	-3 9.9	63.98	282.6	.SAS9..	9	P200C			1.33	.06	1.32	
N7320C	5.19	31.1	-49.68	32.2	S	8	3.7			.061	.058	1.34	
N7331	22 34.05	33 43.6	93.35	327.5	.RSAS0..	0	P200C			.90	.02	.90	
N7331	4.62	31.1	-21.3	37.3						.057	.051	.96	
N7332	22 34.79	34 9.5	93.73	328.0	.SAS6..	4	P200V	S GK	3	2.03	.43	1.93	1.33
N7332	4.62	31.1	-20.72	37.1	S 3	2	5.0			.028	.020	1.98	.05
N7332	22 35.02	23 32.3	87.40	314.7	.L...P/	-2	P200V	D K *	4	1.62	.51	1.50	0.75
N7332	4.81	31.1	-29.67	37.4	E 7	2	4.1			.035	.027	1.55	.03
N7335	22 35.03	34 11.3	93.80	328.0	.LAT...	-1	P200C		3	1.23	.34	1.15	
N7337	4.62	31.1	-20.72	37.0						.048	.045	1.21	
N7337	22 35.15	34 6.8	93.78	327.9	.SBR3..	3	P200C			1.12	.11	1.09	
N7339	4.62	31.1	-20.80	37.0			3.2			.038	.036	1.14	
N7339	22 35.39	23 31.5	87.47	314.7	.SXS4*S	4	P200V	SI *F		1.48	.52	1.36	0.95
A2236+35	4.81	31.1	-29.73	37.3			3.9			.032	.027	1.39	.05
A2236+35	22 36.20	35 4.2	94.50	329.1	.E..0...	-5	P048N			1.25	.00	1.25	
N7343	4.61	31.2	-20.10	36.7			2.1			.071	.071	1.33	
N7343	22 36.32	33 48.5	93.83	327.5	.SBS4*.	4	P048C			1.09	.08	1.07	0.55
N7343	4.63	31.2	-21.19	36.8			1.7			.037	.036	1.11	.05
A2236+05	22 36.57	-5 1.5	62.38	280.9	.I..9..	10	P048N			1.20	.49	1.09	
D215	5.22	31.2	-51.36	30.9	S		1.5			.039	.038	1.10	
N7329	22 37.0	-66 44	320.98	225.9	.SBR3..	3	R060V		3	1.62	.17	1.58	
A2237+11	6.89	31.3	-45.80	-2.0			3.4		4	.075	.047	1.61	
A2237+11	22 37.1	11 31.1	79.18	299.9	.S..4..	.4	P048N			1.30	.41	1.20	
A2237+34	4.99	31.2	-39.64	35.5						.039	.038	1.23	
A2237+34	22 37.4	34 7	94.20	327.9			1.8			.87	.00	.87	
A2237+02	4.63	31.2	-21.04	36.5						.075	.100		
A2237+02	22 37.6	-2 41	65.46	283.5						1.42	.18	1.38	
A2237+02	5.19	31.3	-50.05	31.5						.075	.100		
A2237+37	22 37.6	37 57	96.32	332.6	.SXS4..	4	P048N			1.31	.07	1.29	
N7348	4.56	31.2	-17.77	36.0			2.1			.039	.038	1.34	
N7348	22 38.12	11 38.7	79.53	300.1	.S..6*.	6*	P048C			1.13	.21	1.08	
15240	4.99	31.3	-39.69	35.2			1.6			.038	.037	1.10	
15243	22 39.0	-45 4	349.97	243.6	.SBR1..	1	R060V		3 S	1.51	.12	1.48	
15243	5.89	31.4	-58.72	10.6			3.3			.112	.073	1.51	
A2239+19	22 39.0	23 7	88.00	314.2						.86	.05	.85	
MK308	22 39.50	19 59.9	86.05	310.3	.I..0.S.	0S	P648C			.042	.045		
N7361	4.88	31.4	-33.18	36.1			1.2			.75	.14	.72	*
N7361	22 39.52	-30 19.2	19.31	256.3	.S.R5*S	5*	W100V			1.54	.52	1.42	*
A2240+29	5.58	31.4	-61.60	18.7	S	7*	3.4			.033	.028	1.44	
A2240+31	22 40.30	29 27.8	92.15	322.1	.SB.....		P048N			.90	.17	.86	
N7363	22 40.8	31.4	-25.34	36.2			1.2			.039	.038	.90	
A2242+06	22 40.9	31.4	-23.74	36.0									
N7368	22 40.99	33 44.2	94.68	327.3	.SXS7*.	7	P048C			1.06	.02	1.06	
A2242+06	4.66	31.4	-21.75	35.8			1.7			.056	.052	1.09	
N7368	22 42.6	6 10	75.96	294.0	.SXS8..	8	P048N			1.50	.24	1.44	
N7368	5.07	31.5	-44.62	32.9			2.3			.039	.038	1.46	
N7371	22 42.7	-39 36	359.83	248.6	.SB.3S/	3	P048C			1.51	.73	1.34	
A2243+37	5.73	31.5	-61.18	13.1			1.6			.120	.077	1.37	
N7377	22 43.42	-11 16.0	55.52	275.0	.RSAR0*.	0*	W060V			1.32	.01	1.32	*
A2243+37	5.29	31.5	-56.42	26.9	S 3	5*	3.0	DS *G	3 S	.045	.034	1.35	
N7377	22 43.9	37 48	97.38	332.2	.SX.6*P	6*	P048N			1.07	.09	1.05	
N7377	4.60	31.6	-18.51	34.8			1.6			.039	.038	1.09	
N7383	22 45.08	-22 34.6	35.83	264.1	.LAS...	-1	W100V		3	1.34	.09	1.32	0.70
N7383	5.44	31.6	-61.58	21.5	E 1		3.4	D K	03	.088	.045	1.35	.07
N7385	22 47.1	11 20.6	81.57	300.3	.LB.....	-2	P048N			1.01	.06	1.00	0.65
N7385	5.02	31.7	-41.29	33.0			1.5			.050	.050	1.04	.05
N7385	22 47.42	11 20.6	81.66	300.3	.E..1.P*	-5	P048C			1.20	.06	1.19	0.92
N7386	5.02	31.7	-41.32	33.0			1.9			.069	.063	1.24	.03
N7386	22 47.54	11 26.0	81.77	300.4	.LA...*	-2	P048C			1.32	.08	1.31	0.90
N7389	5.02	31.7	-41.27	32.9						.071	.071	1.35	.03
N7387	22 47.8	11 19	81.74	300.3	.LB.....	-2	P048N			1.11	.21	1.06	0.65
N7387	5.02	31.7	-41.40	32.9			1.6			.042	.045	1.10	.05
N7387	22 47.8	11 22	81.78	300.3	.L...-*	-3*	P048N			.86	.10	.83	*
N7393	5.02	31.7	-41.36	32.9			1.2			.042	.045	.87	
N7393	22 49.06	-5 49.4	64.66	281.3	.SBT5P.	5	W100V		3 S	1.31	.30	1.24	
N7392	5.22	31.8	-54.26	27.7			3.1			.048	.039	1.26	
A2251+31	22 49.12	-20 52.3	39.87	266.2	.SAS4..	4	W100V		3	1.31	.21	1.26	0.80
A2251+32	5.40	31.8	-61.96	21.5	S 3	3*	3.2	S P GK*	4VS	.049	.038	1.28	.05
A2252+32	22 51.1	31 23	95.43	324.3						.76	.03	.76	
N7410	4.75	31.9	-24.85	33.8						.042	.045		
N7410	22 51.8	32 14	96.02	325.4									
N7410	4.75	31.9	-24.17	33.6									
N7410	22 52.0	32 13	96.06	325.3									
N7410	4.75	31.9	-24.21	33.6									
N7410	22 52.18	-39 55.7	358.03	249.3	.SBS1..	1	S074C		3	1.74	.43	1.64	1.08
N7410	5.67	31.9	-62.83	11.4			3.6		03	.075	.037	1.67	.07

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _c (15)	B _T m.e. (16)	m' _B m' ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _T ² (U-B) _T ² (23)	Log S _H N _H N ₂ N ₊ (24)	α ₊ α ₊ (25)	Log S _H N _H A ₂ (26)	RI HI (27)	V N _H m.e. (28)	V ₀ ΔV (29)		
N7309	13.1	13.05	13.0	.27	0.51	0.06	0.61	0.17	.42						3943	4086	P
A2231+32	12.88	.08	14.5	12.74	.03	.03	.04	.04	-.01			1.20			0 1 33	143	
N7313				.27								2 .01			2 0 9	278	
N7314	11.9	11.60	13.1	.27	0.69	*	0.74	0.08	.56			1.22			1626*	1694	PT
N7316	11.64	.09	14.0	11.08	.04	*	.04	.05				1 .01	2.44		1 1 38	68	
		*		.36											5548	5800	
															0 2 43	252	
N7317		14.60	13.6	.49	0.97	0.45	0.98	0.52	.80						6736	7015	P
V288		.08	14.3	14.01	.03	.04	.02	.03	.38						0 1 65	279	
N7318.		13.55	.49	.094	0.27	.02	*	*									
N7318A		.07		.02	.04												
V288		14.30	13.0	.49	1.02		1.04		.85						6697	6976	P
N7318B		.08	14.2	13.71	.05		.03								0 3 28	279	P
V288		14.0	14.5	.49	0.95		1.02		.77						5732*	6011	P
N7320		.13	14.8	13.34	.05		.04								0 2 31	279	P
N7320		13.25	13.7	.49	0.60	-.11	0.64	-.08	.43			.56			763	1042	P
V288		.09	14.1	12.55	.03	.03	.03	.03	-.23			3 .01	2.61		3 1 9	279	
N7319		14.0	14.0	.49	0.95	0.26	1.03	0.35	.78			.42			6599	6878	PS
V288		.1	14.8	13.38	.04	.04	.04	.04	.10			2 .01	2.13		2 1 11	279	
A2233-03				.27								.90			1694	1868	P
												1 .01			1 0 10	174	
N7320C		16.7	.49	.06	1.18				1.01						6000	6279	P
V288		.15	16.0	16.11	.06										0 1 150	279	
N7331	11.2	10.35	12.5	.49	0.84	0.25	0.99	0.36	.64	1.70	1.14	2.01	2.84		826	1105	PST
N7332	10.44	.09	14.3	9.51	.03	.05	.02	.02	.08	7 5 3	1.14	3 .02	2.00		2 4 9	279	
N7332	12.6	11.85	11.1	.38	0.90	0.37	0.91	0.41	.76						1191	1451	PT
	12.21	.05	13.5	11.25	.02	.03	.02	.02	.25						0 3 11	260	
N7335				.49											6298	6577	
N7337				.49											0 1 60	279	S
N7339		13.00	13.2	.38	0.86	0.12	0.93	0.21	.67						1276	1536	
A2236+35		.08	13.9	12.20	.03	.05	.03	.05	-.05	1.56	.615				0 1 27	260	
				.50						1 1 1	.545				8297	8577	
N7343		14.25	12.5	.48	0.85	0.18	0.81	0.27	.72						0 2 48	280	S
		.13	14.3	13.70	.05	.05	.06	.05	.07						1216	1495	
A2236-05				.27								.57			0 1 200	279	
N7329	13.0			.34								1 .03			830	995	
A2237+11	12.32		14.8	.31											1 0 10	165	
A2237+34				.49											7335	7561	
A2237-02				.27											1 1 12	226	
Z2183															7411	7690	S
A2237+37				.55											0 1 105	279	
N7348				.31													175
I5240	12.6			.28											4697	4980	
I5243.	12.26		14.4	.37											1 1 16	283	
Z2185		14.95	.35	.064	0.00	*	*		.47						1503	227	
A2239+19		.09	13.2	14.40	.03	.1			-.04						0 1 84	1476	
N7361	12.8	12.95	.27	.27	0.45	-.27	*	*	.28			1.43			7130	7388	
A2240+29	12.72	.09	14.2	12.26	.04	.04			-.39	1.00*	.675	1 .03	.68		0 1 105	258	
A2240+31				.44											7032	7282	
42111				.47											0 2 43	250	
N7363				.29											1212	1259	
A2242+06				.27											1 1 25	47	
N7368				.27											7350	7620	
N7371	12.9	12.8	.26	.26	0.71	0.13	*	*	.63						0 1 120	270	
A2243+37	12.77	.1	14.2	12.50	.03	.04			.10						9740	10014	
				.53											0 1 105	274	
N7377	12.7	12.65	11.6	.26	1.01	0.35	1.03	0.39	.91								277
N7383	12.59	.13	14.0	12.28	.05	.06	.04	.06	.29						2389	2525	
		14.85	13.6	.30	0.99	0.50	1.01	0.55							0 1 45	136	
		.08	14.6		.04	.06	.04	.06							4785	5067	
N7385		13.35	13.4	.30	1.06	0.46	1.07	0.50	.92	2.44	.60		-2.44		1 1 16	282	
		.05	14.2	12.93	.03	.04	.02	.03	.43	11 9 7	.60				3416	3499	
N7386		13.60	13.6	.30	1.06	0.43	1.08	0.48	.92						0 1 65	83	
		.07	14.9	13.16	.03	.04	.02	.03	.39								222
N7389		14.45	13.2	.30	1.06	0.35	1.08	0.39							7829	8051	
		.13	14.3	.30	.05	.06	.05	.06							0 1 65	222	
N7387		14.95	.30	.097	0.52	*	*	*									222
N7393		.09	13.9	.26	.05	.06									3813	3971	P
V 68															0 1 82	158	
N7392	12.6	12.65	12.1	.25	0.80	0.12	0.86	0.21	.69						2925	3015	PT
A2251+31	12.82	.08	13.5	12.21	.04	.04	.04	.04	.02						0 1 87	90	
42122				.42											6446	6717	
A2251+32				.43											0 1 185	271	
42123															6744	7016	
A2252+32				.43											0 1 150	272	
42123															6611	6883	
N7410	11.8	11.3	12.2	.26	0.92	0.49	0.94	0.53	.77						0 1 150	272	T
	11.37	.13	13.8	10.68	.05	.06	.04	.04	.36						1638	1634	
															0 1 18	-4	

NGC IC, A Mk, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (I) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(DO) Log Do (12)	Log Ae m.e. (13)
N7413	22 52.58	12 57.2	84.27	302.4	.L..-P*	-3*	P200C						0.40
N7408	5.01	31.9	-40.75	32.0	.SB..*		....V						.06
N7412	22 52.7	-63 58	321.96	229.1									
IS267A	5.39	32.0	-68.99	9.5	.SB53..	3	S030V		3 S	1.60	.11	1.57	
IS269A	22 53.07	-43 42.3	350.38	246.1	.SA.5*	5*	S030C			1.51	.48	1.40	
	5.73	32.0	-61.57	9.3						1.41	.095	1.42	
	22 53.1	-36 39	4.97	252.3	.IB.9*	10*	P048C			1.20	.05	1.19	
	5.60	32.0	-63.88	13.0		9	1.6			.224	.141	1.20	
N7416	22 53.10	-5 45.8	65.87	281.8	.SBR3..	3	W060V			1.53	.46	1.42	1.00
N7418	5.21	32.0	-54.98	26.8	.SXT6..	6	W100V		3VS	3.0	.048	.038	.05
IS269B	22 53.80	-37 17.7	3.47	251.8		3			5	1.52	.08	1.50	1.07
IS267B	5.61	32.0	-63.87	12.5	.S..5-/-	5	S030C		4 S	.054	.036	1.52	.05
IS267C	22 53.9	-36 31	5.19	252.5						1.60	.57	1.47	
IS267D	5.60	32.0	-64.06	12.9	.SB.3*/	3*	S030C			1.20	.075	1.48	
IS267E	22 54.09	-44 1.7	349.60	246.0						1.28	.46	1.17	
IS267F	5.73	32.0	-61.60	8.9						1.58	.095	1.20	
IS267G	22 54.1	-36 49	4.50	252.2	.S..3-/-	3	S030C			1.35	.74	1.18	
	5.60	32.0	-64.03	12.7			1.2			.183	.129	1.20	
N7421	22 54.10	-37 37.0	2.73	251.5	.SRT2..	2	W100V		3	1.35	.03	1.34	*
N7412A	5.61	32.0	-63.84	12.3	.SB.7*/	7*	S030C		03 S	.040	.032	1.37	
IS267H	22 54.30	-42 59.7	351.54	246.9						1.54	.96	1.31	
IS267I	5.71	32.0	-62.07	9.5	.LAT0*	-2	C060C			.120	.079	1.33	
IS267J	22 54.37	-43 39.9	350.24	246.3						1.70	.09	1.68	1.12
IS267K	5.72	32.0	-61.80	9.1	.E.3..	-5	R074V		3	.112	.065	1.72	.03
IS267L	22 54.38	-36 43.8	4.67	252.3									1.06
IS267M	5.60	32.0	-64.11	12.7	.SXT6..	6	S074V			1.88	.05	1.87	.04
IS267N	22 54.47	-41 20.4	354.80	248.3		3	4.3		03 S	.027	.019	1.89	*
IS267O	5.64	32.0	-62.75	10.3									
IS267P	22 54.53	4 24.6	77.62	292.9	.E.2.P*	-5	P048C			.63	.06	.62	*
IS267Q	5.10	32.0	-47.87	29.6			.8			.075	.100	.66	
IS267R	22 54.6	-65 18	320.42	228.1									
IS267S	6.43	32.0	-48.05	-2.7	.SXR1..	1	P048N			1.41	.23	1.36	
IS267T	22 54.7	-1 18	71.77	286.7			2.2			.039	.038	1.39	
IS267U	5.16	32.0	-52.18	27.9	.LA....	-2	S030V			1.40	.35	1.32	
IS267V	22 54.95	-36 17.7	5.59	252.8			1.7			.183	.095	1.35	
IS267W	5.59	32.0	-64.31	12.8	.SBR5*/	5*	S030C			1.57	.61	1.43	
IS267X	22 55.2	-36 7	5.97	253.0			1.8			.129	.082	1.46	
IS267Y	5.58	32.1	-64.40	12.9									
IS267Z	22 55.3	-34 1	10.78	254.8	.S..3*	3*	P048C						
A2255-04A	5.55	32.1	-64.77	13.9						1.12	.09	1.09	
A2255-04B	22 55.5	-4 2	68.77	283.8	PSA54*P	4	P200C			.061	.058	1.11	
A2255-04C	5.19	32.1	-54.25	26.8	PSB58P.	8	P200C			1.13	.08	1.11	
A2255-04D	22 55.6	-4 5	68.74	283.8	.SRT6*P	6	P200C			.061	.058	1.13	
A2255-04E	5.19	32.1	-54.30	26.8			3.3			1.11	.00	1.11	
A2255-04F	22 55.6	-4 3	68.78	283.8			3.3			.061	.058	1.13	
A2255-04G	5.19	32.1	-54.28	26.8			2.0			1.24	.05	1.23	
A2255-04H	22 55.8	2 2	75.66	290.4	.SX55..	5	P048N			.039	.038	1.25	
A2255-04I	5.13	32.1	-49.90	28.7									
IS267A	22 56.09	14 54.1	86.62	304.9									
IS267B	4.99	32.1	-39.61	31.5	.SBR1..	1	P048N			1.29	.08	1.27	
IS267C	22 56.2	35 32	98.56	329.2			2.1			.039	.038	1.32	
IS267D	4.73	32.1	-21.67	32.6	.SRT6*	6*	C060C			1.46	.13	1.43	*
IS267E	22 56.67	-37 58.4	1.64	251.5	.SA.5*	5	P048C		3 S	.095	.059	1.45	
IS267F	22 56.96	15 16.9	87.11	305.4			1.7			1.08	.00	1.08	
IS267G	4.99	32.1	-39.41	31.4	.S..0*/	0*	P048C			.037	.035	1.11	
IS267H	22 57.51	-13 4.5	56.23	274.8			1.7			1.25	.35	1.17	
IS267I	5.28	32.1	-60.29	23.0						.058	.049	1.20	
IS267J	22 57.52	-13 6.1	56.19	274.7	.L..0*/	-2*	P048C			1.31	.34	1.23	
IS267K	5.28	32.1	-60.31	23.0	.SATA..	4	W100V		S P *FG	.071	.079	1.26	*
IS267L	22 57.58	15 42.8	87.57	305.9	S 5 KT-	3*	3.3		4 S	1.43	.32	1.35	
IS267M	4.99	32.1	-39.12	31.3	.SBS7*P	7*	2.0			.031	.025	1.38	
IS267N	22 57.6	-35 38	6.84	253.6						1.45	.22	1.40	
IS267O	5.56	32.1	-64.97	12.7						.316	.183	1.41	
IS267P	22 57.76	25 49.7	93.87	317.7									
IS267Q	4.87	32.1	-30.42	32.3									
IS267R	22 57.8	16 6	87.90	306.3									
IS267S	4.99	32.1	-38.82	31.3									
IS267T	22 57.8	26 32	94.27	318.6									
IS267U	4.86	32.1	-29.80	32.3									
IS267V	22 58.1	7 1	81.00	296.0									
IS267W	5.08	32.2	-46.37	29.4									
IS267X	22 58.15	16 5.6	87.98	306.3									
IS267Y	4.99	32.2	-38.87	31.2	.LAT-5.	-3	P200V		D GK	1.64	.25	1.58	1.20
IS267Z	22 58.61	29 52.7	96.23	322.5	E P		4.4		3VS	.047	.029	1.63	.03
IS267A	4.83	32.2	-26.93	32.2	.E.4...	-5	W100V			1.31	.11	1.28	
IS267B	22 58.63	16 7.2	88.13	306.4			3.3		04 S	.058	.044	1.33	
IS267C	4.99	32.2	-38.91	31.1									
IS267D	22 58.7	9 20	83.12	298.7						.87	.14	.84	
IS267E	5.06	32.2	-44.58	29.8						.075	.100		
IS267F	22 59.2	2 0	76.63	290.6	.S..3P.	3	P048N			1.10	.10	1.08	
IS267G	5.13	32.2	-50.47	27.8			1.7			.039	.038	1.11	
IS267H	22 59.3	-39 51	357.18	250.1	.SA56..	6	S030V			1.77	.51	1.65	
IS267I	5.61	32.2	-64.14	10.3	.SX.3*P	3	P048C			.069	.043	1.67	
IS267J	22 59.38	15 42.8	88.05	306.0			2.0			1.48	.57	1.35	
IS267K	4.99	32.2	-39.35	30.9	.E.1.P*	-5	P048C			.035	.031	1.38	
IS267L	22 59.41	15 42.3	88.05	305.9			1.3			.86	.00	.86	
IS267M	4.99	32.2	-39.36	30.9						.040	.041	.91	
IS267N	22 59.53	15 41.7	88.08	305.9	PLB5*.	-1	P048C			1.20	.20	1.15	
IS267O	4.99	32.2	-39.39	30.8	.SBS5*/	5*	S030V		2	.040	.039	1.19	
IS267P	23 0.0	-41 6	354.42	249.1			1.6			1.57	.78	1.39	
IS267Q	5.63	32.2	-63.81	9.5	.S..5..	5	P048N			.085	.075	1.41	
IS267R	23 0.2	32 20	97.81	325.4			1.8			1.10	.02	1.09	
IS267S	4.80	32.2	-24.90	31.9	.E.3.*P	-5*	P048C			.039	.038	1.12	
IS267T	23 0.51	16 20.0	88.77	306.7			1.5			1.06	.17	1.02	
IS267U	4.99	32.2	-38.97	30.7						.050	.050	1.07	
IS267V	23 0.74	8 36.3	83.11	298.0	PSXT1..	1	W100V		SDP*G *	1.25	.13	1.22	0.7
IS267W	5.07	32.2	-45.47	29.2	S N **		3.2		5	.033	.028	1.25	.1

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _C (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _H N _H N _H N _H (24)	α ₋ α ₊ (25)	Log S _H N _H A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)	
N7413		15.15	12.6	.30	1.01	0.34	1.02	0.37						9740	9966	
N7408		.06		.32	.02	.04	.02	.04						0 2 24	226	
N7412	12.2	11.9		.27	.52	-.02			.43					1705	-121	T
15267A	11.79	.15	14.5	11.53	.06	.07			-.09					0 1 35	1686	
15269A				.27											-19	
				.26											-23	
N7416		13.10	13.6	.25	0.80	0.33	0.87	0.42							11	
N7418	11.8	.09	14.4	.26	.04	.04	.04	.04				1.02		1510	157	PT
15269B	11.66	.13	14.2	11.67	.05	.05	.04	.04	-.52			1.01	2.34	1 0 30	1518	
15267B				.26											8	
15264				.27											11	
				.26											-25	
															10	
N7421	12.8	12.70		.26	0.72	0.07	*	*								PT
N7412A	12.67	.12	14.2	.27	.05	.05									6	
15267	11.8	11.40	12.5	.27	0.93	0.30	0.96	0.40	.84						-20	PT
11459	11.17	.09	14.5	11.07	.03	.1	.02	.1	.24	1.90				0 1 52	1691	
N7424	11.3	10.98	11.8	.26	0.97	0.55	0.98	0.59		0 2 1	.715			1624	-24	T
	12.0	.08		.26	.03	.06	.02	.03						0 2 17	1634	
	11.04	10.985	15.1	10.68	*	*	*	*						0 1 13	10	PT
		.13												862	850	
														0 1 13	-12	
11460		15.1	13.1	14.72	0.75	.1	*		.62					7262	7458	
N7417		.1		.32	.1					1.95*	1.095			0 1 75	196	
N7428				.26						1.1 0					-127	
15269	13.1			.26										3020	3194	
15270	12.94		13.9	.26										0 1 29	174	
				.26										2122	2134	T
														0 1 11	12	
15271	12.6			.26											13	
A2255-04A				.25											23	
V295				.25										3581	3744	P
A2255-04C				.25										0 1 150	163	
V295				.25											163	
A2255-04B				.25										3792	3955	P
V295				.26										0 1 150	163	
A2255+02														4830*	5017	
														1 2 24	187	
11461				.30										9161	9391	
N7440				.46										0 2 43	230	
15273	12.0	11.90	13.7	.26	0.45	-.01	*	*						5663	5938	
N7442	11.96	.13		.30	.05	.05								1 1 13	275	PT
N7443				.25											3	
				.25											231	
N7444				.25											123	
N7448	11.8	12.15	13.3	.30	0.50	-.15	*	*	.36			1.12		2199	2431	P
15269C	12.13	.06		11.58	.02	.04			-.25			2.01	2.19	2 0 20	232	
A2257+25		*		.36	*	*				1.11*	.675				15	
A2257+16				.30						1 1 0				7260	7518	
														0 1 120	258	
														9900	10133	
														0 1 200	233	
A2257+26				.36										7088	7347	
47128				.27										0 1 105	259	
N7455														7950	8154	
														0 1 200	204	
A2258+16				.30										9833	10066	
N7457	12.3	11.65	13.1	.39	0.89	*	0.91	0.35	.78					0 1 220	233	
N7454	11.69	.07	14.1	11.20	.03	.02		.04						525	790	PT
				.30										0 1 250	265	
															233	
A2258+09				.28										4650	4862	
N7460				.26										0 1 200	212	
														3296	3481	
N7456	12.5			.26										0 1 28	185	
N7463	12.06		14.5	.30											-6	
N7464				.30										2445	2676	
														0 1 26	231	
														1877	2108	
N7465				.30										0 1 32	231	
N7462	12.7			.26										1959*	2190	
A2300+32	12.79		13.5	.41										0 3 23	231	
N7468		*		.30	*	*						.91			-12	
												1.01		5965	6234	
N7469	13.0	12.60	11.6	.27	0.75	-.28	0.60	-.50	.62	1.40	.215		.95	0 1 25	269	
	13.13	.04	13.4	12.16	.02	.05	.02	.05	-.34	2 5 6	.92			2089*	2322	
														1 3 12	233	
														4894	5102	P
														0 4 9	208	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log A _e m.e. (13)
15283	23 0.78	8 37.4	83.13	298.0	.SAR6PS	6	P200C			.94	.32	.87	
A2301+22	5.07	32.2	-45.46	29.2			2.7			.036	.033	.89	
MK315	23 1.59	22 21.2	92.79	313.7	.E.1.PS	-5S	P048C						0.25
N7479	4.93	32.3	-33.89	31.2									.05
A2302+16	23 2.44	12 3.1	86.28	301.9	.SB55..	5	P200V	B F	2	1.61	.10	1.59	1.25
15284	5.04	32.3	-42.84	29.5	SB4	1	4.5		3VS	.028	.022	1.61	.02
	23 2.8	16 35	89.54	307.1	.S..9..	9	P048N			1.43	.47	1.32	
	4.99	32.3	-39.04	30.2			2.0			.039	.038	1.34	
	23 4.30	18 51.1	91.38	309.8	.S..2*/	2*	P048C			1.11	.54	.98	
	4.94	32.4	-37.25	30.2			1.3			.038	.036	1.01	
15285	23 4.4	22 40	93.66	314.2						1.27	.11	1.24	
	4.94	32.4	-33.92	30.6						.042	.045		
N7495	23 6.5	11 48	87.24	301.9	.SX55..	5	P048N			1.33	.04	1.32	
	5.05	32.4	-43.59	29.5			2.2			.039	.038	1.34	
N7497	23 6.58	17 54.4	91.39	308.8	.SB56..	6	P048C			1.70	.51	1.58	
	4.99	32.4	-38.34	29.5			2.5			.032	.027	1.60	
N7496	23 6.98	-43 42.0	347.84	247.5	.SB53..	3	C060V		5	1.54	.10	1.52	1.25
	5.61	32.5	-63.80	7.1			3.3		4 S	.129	.082	1.55	.05
N7499	23 7.84	7 18.6	84.14	297.0	.LAS0S.	-2	P048C			1.16	.22	1.11	
	5.09	32.5	-47.53	27.2			1.7			.041	.043	1.15	
N7501	23 7.98	7 19.0	84.18	297.0	.E.1.*.	-5*	P048C			.051	.08	.87	
	5.09	32.5	-47.55	27.1			1.3			.051	.058	.91	
N7503	23 8.17	7 17.8	84.23	297.0	.E.2.*.	-5*	P048C			.97	.04	.96	0.55
	5.09	32.5	-47.59	27.1			1.5			.051	.058	1.00	.06
N7507	23 9.44	-28 48.8	23.45	261.0	.E.0...	-5	W100V			1.42	.00	1.42	1.00
	5.40	32.5	-68.04	13.7	E 0		3.6			.061	.047	1.46	.06
N7496A	23 3	-43 3	348.59	248.3	.SB59*.	9*	S030C			1.45	.31	1.38	
	5.58	32.5	-64.54	7.0			1.9			.316	.03	1.39	
A2310+10	23 10.2	10 28	87.33	300.6	.P.....		P048N			1.07	.58	.93	
MK526	5.07	32.6	-45.20	27.3			1.1			.050	.050	.96	
N7513	23 10.54	-28 37.9	23.96	261.3	.SB53P.	3	P048C			1.51	.10	1.48	
	5.40	32.6	-68.27	13.6			2.5			.039	.038	1.50	
N7518	23 10.6	6 3	83.92	295.8	RSXR1..	1	P048N			1.19	.03	1.19	
MK527	23 10.6	32.6	-44.96	26.2			1.9			.050	.050	1.22	
N7525	23 11.16	13 44.9	89.95	304.3									
MK316	5.04	32.6	-42.50	27.7									
A2311+23	23 11.34	23 32.9	95.86	315.3									
MK317	4.96	32.6	-33.87	29.1									
N7532	23 11.8	-2 58	75.23	286.4						1.25	.39	1.16	
MK529	5.17	32.6	-56.29	23.3						.075	.100		
N7537	23 12.03	4 13.5	82.77	294.0	.SA.4*.	4*	P200C	S *F		1.37	.55	1.25	0.70
	5.12	32.6	-50.66	25.4			3.3			.033	.027	1.27	.05
N7531	23 12.05	-43 52.4	346.42	247.7	.SAR4..	4	S074V			1.54	.37	1.45	
	5.57	32.6	-64.49	6.2			3.3		D3	.043	.028	1.47	
N7541	23 12.18	4 15.6	82.85	294.0	.SBT4*P	4	P200C	SI *A	2	1.54	.40	1.44	1.00
	5.12	32.6	-50.65	25.3	S 5	3*	3.8			.030	.024	1.46	.03
A2312+07	23 12.2	7 2	85.58	297.4						.93	.30	.86	
	5.09	32.6	-44.03	26.1			.075			.100			
N7547	23 12.5	18 42	93.44	309.9	PSXS0*P	0	P200C			1.12	.32	1.05	
	5.00	32.6	-38.31	28.2			3.0			.039	.038	1.09	
N7550	23 12.8	18 41	93.51	309.9	.LA.-..	-3	P200C			1.23	.03	1.22	
	5.01	32.6	-38.36	28.1			3.5			.051	.058	1.26	
N7549	23 12.8	18 46	93.56	310.0	.SB56P.	6	P200C			1.46	.52	1.34	
	5.00	32.6	-38.29	28.2			3.5			.039	.038	1.36	
N7564	23 13.1	7 1	85.52	297.0									
	5.10	32.6	-48.50	25.8									
N7552	23 13.42	-42 51.5	348.15	248.8	PSBS2..	2	S074V		25	1.55	.15	1.51	0.95
	5.54	32.7	-65.24	6.5			3.5		5	.067	.058	1.54	.02
N7562	23 13.42	6 24.9	85.12	296.4	.E.2*..	-5	W060V			1.36	.15	1.33	0.85
	5.10	32.6	-49.04	25.6			2.9			.061	.046	1.37	.04
N7562A	23 13.49	6 22.8	85.11	296.4	.S..7*/	7*	P048C			1.21	.52	1.09	
	5.10	32.7	-49.08	25.6			1.5			.037	.034	1.11	
N7578A	23 14.7	18 25	93.87	309.7	.L..0P.	-2	P200C			1.20	.00	1.20	
	5.01	32.7	-38.80	27.7			3.5			.051	.058	1.24	
N7576	23 14.79	-5 0.2	73.74	284.6	.LAR*..	-1	W100V		3	1.17	.10	1.15	
	5.19	32.7	-58.31	22.0			3.0		5	.062	.049	1.18	
N7578B	23 14.8	18 26	93.91	309.7	.E.1.*.	-5*	P200C			1.06	.04	1.05	
	5.01	32.7	-38.80	27.6			3.2			.042	.045	1.10	
N7580	23 15.10	13 43.8	91.07	304.5	.S...S.		P048N			.93	.09	.91	
MK318	5.05	32.7	-42.99	26.8			1.3			.039	.038	.94	
N7585	23 15.46	-4 55.3	74.08	284.7	PLAS*P.	-1	W100V		3	1.37	.09	1.35	*
	5.19	32.7	-58.36	21.8	S N *		3.5		D3	.088	.044	1.38	
N7587	23 15.47	9 24.5	88.14	298.8	.SB.2S/	2	P048C			1.15	.55	1.03	
	5.08	32.7	-46.78	25.8			1.3			.037	.036	1.06	
N7582	23 15.64	-42 38.7	348.08	249.1	PSBS2..	2	S074V		4	1.66	.32	1.58	1.10
	5.52	32.7	-65.70	6.2			3.5		3VS	.032	.023	1.61	.04
N7592	23 15.81	-4 41.3	74.50	285.0	.S..2*P	2*	P048C			1.15	.10	1.13	
	5.18	32.7	-58.25	21.8			1.8			.054	.046	1.16	
N7597	23 16.0	18 25	94.22	309.7						1.12	.00	1.12	
	5.02	32.7	-38.94	27.4			.075			.100			
A2316+24	23 16.17	24 57.5	97.77	317.1	.SB.1..	1	P048N			1.06	.12	1.03	
MK319	4.97	32.7	-33.07	28.1			1.6			.039	.038	1.07	
N7590	23 16.18	-42 30.7	348.24	249.3	.SAT4*.	4*	S074V			1.43	.38	1.34	0.83
	5.51	32.7	-65.85	6.2			3.0			.043	.032	1.36	.04
N7601	23 16.26	8 57.6	88.04	299.3	.SX55*.	5	P048C			1.17	.10	1.14	
	5.09	32.7	-47.26	25.5			1.8			.038	.036	1.16	
N7602	23 16.3	18 26	94.31	309.7						.79	.00	.79	
	5.02	32.7	-38.96	27.3						.075	.100		
N7600	23 16.30	-7 51.2	70.38	281.8	.L...-/	-3	W100V		4 S	1.38	.34	1.30	*
	5.21	32.7	-60.62	20.7	E 6		3.2			.100	.049	1.33	
N7603	23 16.4	-0 1	80.10	289.8	.SAT3*P	3	P200C			1.23	.17	1.19	
MK530	5.15	32.7	-54.73	23.1			3.4			.039	.038	1.21	
N7606	23 16.49	-8 45.6	69.11	289.9	.SAS3..	3	W100V	S FG	2	1.76	.35	1.68	1.35
	5.21	32.7	-61.29	20.3	S 4	1	4.0		D3	.034	.024	1.70	.04
N7599	23 16.60	-42 31.8	348.10	249.3	.SASS..	5	S074V		1	1.64	.45	1.53	1.10
	5.51	32.7	-65.91	6.1			3.4		2VS	.042	.031	1.55	.04
N7609	23 17.0	9 13	88.47	299.7	.P.....		P200C			1.19	.08	1.17	
	5.09	32.7	-47.14	25.4			3.4			.075	.100	1.20	
N7611	23 17.08	7 47.4	87.40	298.1	.SB.0S.	0	P048C			1.17	.35	1.08	0.55
	5.10	32.7	-48.37	25.0			1.6			.037	.031	1.11	.04

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _C (15)	B _T m.e. (16)	m _E m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _E m.e. (21)	(U-B) _E m.e. (22)	(B-V) _E (U-B) _T (23)	Log S _R N _N N _N (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _N N _N m.e. (28)	V ₀ ΔV (29)			
I5283		14.8		.27	1.05	.34			.90						4913	5121	P	
A2301+22		.15	13.5	14.25	.06	.07			.19						0 1 72	208		
Z2187		15.2	11.9	.33	0.80	-.10	0.77	-.15							11667*	11915		
N7479	11.9	.1	13.4	.28	.04	.04	.03	.03				1.29			0 2 43	248	P	
A2302+16	11.54	.2	14.3	11.33	.04	*	0.80	0.25	.60			1.01	2.01*		1 3 21	219		
I5284				.31												233		
I5285				.33											6245	6493		
Z2188				.28											0 1 105	248	S	
N7495				.30											4892	5109		
N7497															1 1 9	217		
N7496	12.2	11.60	13.3	.26	0.52	-.05	0.58	0.00	.43						1470	1443	PT	
N7499	11.90	.13	13.9	11.25	.05	.05	.06	.05	-.11						0 1 20	-27		
		.15	14.9	14.26	.06				.86						11916	12117		
N7501		14.9		.27	1.14				.96						0 1 50	201		
N7503		.15	14.1	14.44	.06										12714	12915		
N7507	12.0	14.95	13.2	.27	1.13	0.44	1.19	*	.94	2.22	.85		-3.42		0 1 50	201		
N7507	12.0	.09	14.7	14.48	.03	.06	.04	.04	.44	14 4 9	.85				13229	13430		
N7507	12.0	11.3	11.8	.25	0.93	0.58	0.95	0.62	.86						0 1 65	201		
N7496A	11.75	.1	13.4	11.03	.05	.06	.05	.04	.53						1637	1681		
A2310+10				.26											0 1 75	44		
				.27												-25		
N7513		12.6		.25	.78	.19									6900	7111		
N7518		.15	14.7	.26	.06	.07									0 1 200	211		
N7525		*		.28	*	*										45		
A2311+23				.32											3450	3645		
N7532				.24											0 1 200	195		
N7537		13.80	12.8	.26	0.62	-.02	0.74	0.03	.44						12227	12448		
N7531	12.5	.08	14.1	13.08	.02	.03	.03	.04	-.15						0 1 220	221		
N7541	12.38	11.975	.26	.71	-.03	.03	.03	.03	.57						6255	6502		
N7541	12.8	.10	13.6	11.40	.06	.07	.08	0.14	.58						0 1 220	247		
A2312+07	12.62	.06	14.0	11.85	.03	.03	.03	.02	-.07						3750	3910		
N7547				.26											0 1 200	160		
N7550				.30											2687	2875	P	
N7549				.30											0 1 30	188		
N7564				.26											1580	1550	PT	
N7552	11.6	11.40	11.6	.25	0.69	0.10	0.72	0.15	.59	1.48	.59*		1.90		0 1 94	-30		
N7562	11.55	.07	13.6	11.01	.03	.03	.02	.02	.03	1 2 5	.59*				2672	2860		
N7562A		.1	14.0	12.28	.03	.06	.02	.06	.60						0 1 100	188		
N7578A				.26											4673	4873	S	
V181				.30											0 1 105	200		
N7576		13.8	.24	.81											4858	5092	P	
N7578B		.15	14.3	13.45	.06										0 1 150	234		
V181				.28											4987	5221	P	
N7580															0 1 150	234		
N7585	12.8	12.6	.1	14.1	12.26	.03	.06	*	.80						4806	5041	P	
N7587	12.59			.26					.38						0 1 150	235		
N7582	11.8	11.405	12.4	.25	0.77	0.16	0.82	0.24	.64						10265	10463	S	
N7592	11.59	.09	13.7	10.88	.05	.05	.03	.03	.06	1 0 4					0 1 105	198		
N7597				.29											1661	1636	PT	
A2316+24		*		.33	*	*									0 3 17	-25		
N7590	11.9	12.15	11.8	.25	0.61	-.01	0.71	0.07	.47						3806	4001		
N7601	12.24	.09	13.2	11.59	.04	.04	.03	.03	-.11						0 1 63	195		
N7602				.29														
N7600	13.1	*	13.8	.24	*	*	*	*		1.30*	1.64*							
N7603	12.88			.25	*	*				0 1 1					10838	11070		
N7606	11.9	11.55	13.8	.24	0.79	*	0.87	0.15	.66						0 1 150	232		
N7606	11.45	.09	14.3	11.01	.05	.04	.04	.04	.45						0 1 60	138		
N7599	12.0	12.01	13.0	.25	0.60	-.06	0.66	0.00	.45							8790	8960	P
N7609	11.91	.12	13.9	11.39	.05	.05	.03	.03	-.17						0 2 56	170		
V 20				.26											2227*	2361	S	
N7611		13.55	11.8	.26	0.95	0.55	0.98	0.60	.80						0 2 54	134		
		.05	13.4	12.99	.02	.04	.02	.04	.45						1686*	1661	PT	
															0 2 22	-25		
																204		
															3383	3582	PS	
															0 1 65	199		

NGC IC, A Mk, DDO (1)	Coordinates				Classification						Diameters			
	RA (1950) 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D0) Log Do (12)	Log A _e m.e. (13)	
N7610	23 17.1 5.08	9 54 32.7	89.01 -46.56	300.4 25.5	.S..6PS	6*	P048N			1.47 .039	.11 .038	1.44 1.46		
N7615	23 17.38 5.10	8 7.6 32.8	87.76 -48.12	298.5 25.1	.S..3S.	3S	P048C			1.07 .054	.24 .046	1.01 1.04		
A2317+25 MK322	23 17.58 4.96	25 56.4 32.8	98.60 -32.30	318.2 27.9										
N7617	23 17.62 5.10	7 53.5 32.8	87.65 -48.35	298.3 24.9	.LA.0*	-2	P048C			1.01 .041	.13 .043	.98 1.01	0.53 .04	
N7620 MK321	23 17.62 4.98	23 56.7 32.8	97.63 -34.12	315.9 27.7	.S..6*	6*	P048N			1.13 .071	.03 .071	1.13 1.15		
N7619	23 17.71 5.10	7 56.0 32.8	87.71 -48.33	298.3 24.9	.E.2...	-5	P048C	E4 K DE *K *		1.46 .065	.04 .052	1.45 1.49	1.0 .1	
N7624 MK323	23 17.92 4.96	27 2.4 32.8	99.21 -31.33	319.4 27.9	.S..5..	5	P048N			1.05 .039	.12 .038	1.02 1.05		
N7623	23 17.97 5.10	8 7.4 32.8	87.94 -48.20	298.6 24.9	.LA..*.	-1	P048C	E4 K		1.27 .040	.14 .043	1.24 1.27	0.70 .03	
N7625	23 17.99 5.04	16 57.2 32.8	93.91 -40.46	308.2 26.7	.SAT1P. E P	1	W100V	I P G *	3 S	1.25 .034	.03 .029	1.24 1.27	*	
N7626	23 18.17 5.10	7 56.6 32.8	87.87 -48.38	298.4 24.8	.E.1.P* E 2P *	-5	P048C	E1 *K *		1.39 .060	.08 .051	1.37 1.41	1.05 .03	
N7631	23 18.91 5.10	7 56.6 32.8	88.10 -48.47	298.4 24.6	.SAR3S.	3	P048C			1.29 .036	.31 .032	1.22 1.25		
N7634	23 19.1 5.10	8 36 32.8	88.67 -47.93	299.1 24.7	.LB....	-2	P048N			1.17 .050	.12 .050	1.14 1.17		
N7632	23 19.4 5.49	-42 46 32.8	346.93 -66.22	249.4 5.6	.LBS*.	-3	P048C							
N7640	23 19.72 4.84	40 34.2 32.8	105.25 -18.94	334.7 27.7	.SB55.. S4	5 3*	P200V	B *F	1	2.03 .028	.63 .020	1.88 1.92	1.55 .04	
A2320+32	23 20.72 4.93	32 15.2 32.8	102.16 -26.76	325.4 27.5	.P.....		P048N			.078 .039	.15 .038	.75 .79		
N7648	23 21.3 5.09	9 23 32.8	89.95 -47.52	300.1 24.4	.L.....	-2	P048N			1.28 .042	.18 .045	1.23 1.26		
N7649	23 21.8 5.06	14 22 32.9	93.44 -43.19	305.5 25.3	.E.3...	-5	P048N			1.20 .051	.14 .058	1.17 1.21	0.75 .05	
A2324+17 MK324	23 24.03 5.05	17 59.5 32.9	96.21 -40.16	309.6 25.4						.048 .050	.05 .050	.75 .75		
A2324+11 MK532	23 24.3 5.09	11 5 32.9	92.09 -46.38	302.1 24.0										
N7671	23 24.80 5.08	12 11.6 32.9	92.98 -45.45	303.3 24.2	.LA..*.	-2	P048C			1.22 .048	.22 .042	1.17 1.20		
N7672	23 25.00 5.08	12 6.6 32.9	92.98 -45.55	303.2 24.1	.S..3..	3	P048C			1.02 .037	.08 .034	1.00 1.03		
N7673	23 25.20 5.02	23 18.9 32.9	99.25 -35.40	315.5 25.9	PSA.5SP	5*	P048C			1.23 .051	.02 .058	1.23 1.26	0.60 .03	
N7674 MK533	23 25.4 5.11	8 30 32.9	90.63 -48.79	299.4 23.2	.SAR4P.	4	P200C			1.08 .039	.02 .038	1.07 1.09		
N7675	23 25.5 5.11	8 29 32.9	90.65 -48.81	299.4 23.2	.LXS*.	-3	P200C			.83 .042	.20 .045	.78 .82		
A2325+24	23 25.5 5.01	24 33 32.9	99.91 -34.29	316.8 25.9										
N7677	23 25.60 5.02	23 15.3 32.9	99.33 -35.49	315.4 25.8	.SXR4..	4	P048C			1.27 .039	.18 .038	1.23 1.26		
N7678	23 25.97 5.03	22 8.7 32.9	98.89 -36.55	314.2 25.6	.SXT5..	5	W060V	S AF	4 S	1.37 .033	.12 .028	1.34 1.37	0.90 .04	
I5325	23 26.0 5.42	-41 36 33.0	347.72 -67.88	251.0 5.0	.SXT4..	4	S030C		3 S	1.40 .141	.00 .088	1.40 1.42		
A2326+14 D216	23 26.05 5.07	14 28.3 32.9	94.78 -43.55	305.8 24.3	.I..9..	10	P200V			1.66 .035	.19 .027	1.61 1.62		
A2326+17	23 26.1 5.06	17 0 33.0	96.25 -41.26	308.6 24.8	.L...*/	-3*	P048C			.96 .042	.19 .100	.92 .96		
N7679	23 26.23 5.13	3 14.2 33.0	86.69 -53.44	294.0 21.7	.LR..P*	-2	W060V			1.29 .045	.18 .035	1.25 1.28	*	
MK534 N7682	23 26.51 5.13	3 15.5 33.0	86.81 -53.46	294.0 21.6	.SBR2..	2	P200C		5	1.08 .047	.09 .043	1.06 1.09		
A2327+40 D217	23 27.55 4.90	40 43.1 33.0	106.78 -19.31	334.8 26.2	.S..9..	9	P048N		3 S	1.64 .039	.07 .038	1.62 1.65		
A2327+25	23 27.6 5.02	25 15 33.0	100.76 -33.82	317.7 25.5										
N7685	23 28.00 5.13	3 37.5 33.0	87.66 -53.34	294.5 21.4	.SX55..	5	P048C			1.33 .038	.10 .035	1.30 1.32		
A2329+25 MK535	23 29.6 5.02	25 33 33.0	101.40 -33.71	317.0 25.1										
N7689	23 29.9 5.52	-54 22 33.0	325.79 -59.40	239.8 -1.2	.SXT6..	6	S074V		3VS	1.45 .039	.15 .025	1.41 1.43		
N7690	23 30.2 5.48	-51 58 33.0	328.67 -61.34	241.9 -2	.SAR3*.	3S	S074V		4VS	1.45 .129	.33 .082	1.37 1.40		
I5328A	23 30.4 5.41	-45 19 33.0	338.92 -66.23	248.0 2.7	.S..1*/	1*	C060C			.98 .139	.39 .072	.89 .92		
I5328	23 30.5 5.41	-45 19 33.0	338.89 -66.24	248.0 2.6	.E.4...	-5	S074V		03	1.39 .129	.19 .063	1.35 1.39	*	
I5328B	23 31.2 5.41	-45 31 33.0	338.32 -66.19	247.8 2.4	.SB55*.	5	S074V			1.21 .112	.53 .071	1.09 1.11		
A2331+29	23 31.2 5.01	29 46 33.0	103.53 -29.88	322.7 25.2	.SBT7P.		P200C			1.14 .039	.11 .038	1.11 1.15		
I5332	23 31.80 5.33	-36 22.6 33.1	359.40 -71.37	256.2 6.2	.SA57..	7	W100V			1.82 .042	.11 .026	1.79 1.81	1.55 .04	
A2332+17 D218	23 32.37 5.07	17 57.0 33.1	98.57 -43.00	309.9 23.4	.I..9..	10	P048N		3VS	1.18 .046	.12 .045	1.15 1.16		
N7702	23 32.7 5.50	-56 17 33.1	323.06 -58.05	238.2 -2.4	RLAR...	-1	S074V		5	1.28 .055	.24 .029	1.22 1.25	0.75 .04	
N7714 MK538	23 33.68 5.14	1 52.7 33.1	88.22 -55.56	293.1 19.5	.SBS3*P	3*	P200V		5	1.33 .034	.13 .028	1.30 1.32		
N7713	23 33.8 5.33	-38 13 33.1	353.75 -70.91	254.7 5.1	.SBR7*.	7	C060C		1	1.63 .082	.33 .051	1.55 1.57		
N7715	23 33.81 5.14	1 52.8 33.1	88.28 -55.58	293.1 19.5	.I..9P/	10	P200V			1.41 .038	.66 .031	1.26 1.27		
I5337	23 33.9 5.07	20 52 33.1	100.43 -38.43	313.1 23.5						.94 .042	.56 .045	.81 .81		
N7716	23 33.96 5.15	0 1.3 33.1	86.60 -57.19	291.2 18.9	.SAR3*. S 3	3* 3*	W100V 3.5	S *6	4 4	1.36 .034	.07 .029	1.34 1.36	0.90 .04	

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)		
	m _H m _c (15)	B _T m.e. (16)	m' ₂₅ m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _{1/2} m.e. (21)	(U-B) _{1/2} m.e. (22)	(B-V) _T ² (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₊ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N _H N ₂ m.e. (28)	V ₀ ΔV (29)			
N7610				.26											3546	3752		
N7615				.26											1 1 10	206		
A2317+25				.33											8041	8291		
42142															0 1 220	250		
N7617		14.75	12.9	.26	0.93	0.56	0.96	0.61	.82						4072	4271		
		.06	14.3	14.38	.03	.06	.03	.06	.51						0 1 150	199		
N7620				.32											9534	9780		
															0 1 220	246		
N7619	12.8	12.1	12.6	.26	1.03	0.59	1.05	0.64	.94						3757	3956	S	
	12.23	.1	14.3	11.78	.02	.06	.01	.03	.55						0 1 50	199		
N7624		14.1	13.9	.34	.66	.05			.53						4477	4729		
		.15	13.9	13.64	.06	.07			-.04						0 1 220	252		
N7623		13.45	12.4	.26	1.02	0.57	1.02	0.62	.91						3463	3662		
		.07	14.3	13.05	.03	.04	.02	.03	.50						0 1 65	199		
N7625	12.9	12.80	13.8	.29	0.70	0.15	*	*	.61			.91			1637	1864	P	
32103=V280	12.96	.08	12.47	.02	.02	.03			.10			2 .01	1.82		2 3 14	227		
N7626	12.8	12.25	13.0	.26	1.01	0.56	1.04	0.61	.92	1.88	1.05				3439*	3638		
	12.42	.05	14.0	11.94	.02	.06	.01	.03	.52	7 510	.81		-.04		0 2 42	199		
N7631				.26												198		
N7634				.26											3150	3350	S	
N7632				.25											0 1 45	200		
N7640	12.5	11.35	14.6	.49	0.54	*	0.60	-.05	.31			2.22			369	-27	PT	
	11.50	.2	14.8	10.35	.04		.03	.05				3 .04	.595		5 2 6	273		
A2320+32				.38						1.08*	.475				5310	5571		
										1 1 0					0 1 120	261		
N7648				.26											4050	4252		
N7649		14.8	14.0	.27	1.10		1.11		.92						0 1 200	202		
		.1	15.4	14.34	.04		.03								12514	12732		
A2324+17				.28											0 1 58	218		
A2324+11				.26											1538	1765		
															0 2 43	227		
N7671		13.6	14.0	.26	.91				.79						7800	8006		
		.15	13.19	.06											0 1 200	206		
N7672				.26											4129	4339		
															0 1 86	210		
N7673		13.0	11.5	.31	0.35	-.15	0.38	-.35	.25			.50			3409	209		
42149		.1	13.9	12.66	.05	.1	.03	.1	-.22			1 .01	2.65		1 3 12	241	P	
N7674				.26											8850	9047		
V343															0 1 200	197	P	
N7675				.26												197		
V343															4920	5164		
A2325+24				.31											0 1 150	244		
42150																		
N7677		*		.31	*	*						.96			3542	3783		
												1 .01			1 1 29	241		
N7678	12.9	12.8	12.8	.30	0.65	-.05	0.73	0.01	.54			.87			3457	3695	P	
	12.79	.1	14.2	12.38	.03	.04	.03	.04	-.13			1 .01	2.01		1 1 27	238		
I5325	12.5			.25														
	12.31		14.2															
A2326+14		12.63	15.3	.27	.59				.48			1.11*			-178	-24	T	
		.11		12.17	.07							1 .02	1.595		1 0 10	216		
A2326+17				.28														
N7679	13.1	13.25		.24	0.57	-.09	*	*	.45						5155	5333	P	
V329	13.05	.08	14.1	12.86	.03	.04			-.11						0 3 21	178		
N7682		14.3	14.3	.24	.92													P
V329		.15			.06													
A2327+40				.48								1.53			425	178		
A2327+25				.32								1 .01			1 0 10	271		
32107															5351	5595		
N7685				.24											0 1 105	244		
A2329+25				.32														
															7350	7594		
N7689	12.3	12.155		.27											0 1 200	244	P	
	12.22	.14	13.9															
N7690	13.0			.26														
	12.88		14.2	.25														
I5328A				.25														
I5328	12.7	11.8		.25	*	*	*	*										
	12.40	.13	13.3															
I5328B				.25														
A2331+29				.34											4925	-44	PS	
V314															5177	252		
I5332	11.9	11.25	14.5	.24	0.66	-.10	0.62	-.07							0 1 105		P	
	11.23	.13	14.9		.05	.05	.04	.04										
A2332+17				.28								.84			1395	1618		
												1 .01			1 0 15	223		
N7702	13.1	13.145	12.4	.27	0.92	0.44	0.94	0.48	.76						6471	6376	PT	
	13.15	.07	13.8	12.63	.04	.06	.03	.06	.38						0 1 140	-95		
N7714				.24											2811	2980	P	
V 51												.93*			1 2 20	169		
N7713	11.8			.24								1 .01			672	662		
	11.65		13.8												0 1 30	-10		
N7715				.24											2764	2933	P	
V 51				.29											0 1 64	169		
I5337																		
N7716	13.0	12.95	12.9	.24	0.73	0.10	0.80	0.20	.65						2546	2708		
	12.82	.05	14.4	12.63	.02	.04	.02	.04	.03						0 1 150	162		

NGC IC, A Mk, DDO (1)	Coordinates				Classification							Diameters			
	RA 100P (2)	Dec 100P (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) W (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log D ₀ Log D ₀ (12)	Log A _e m.e. (13)		
15338	23 33.99	20 52.3	100.46	313.1	.E.S.S.	-5*	P048N			1.06	.18	1.02			
	5.07	33.1	-38.44	23.5			1.5			.051	.058	1.06			
N7713A	23 34.5	-37 53	354.44	255.0	.SXR6..	6*	S030L			1.30	.08	1.28			
	5.32	33.1	-71.19	5.1			1.8			.141	.091	1.30			
A2334+00	23 34.83	0 6.9	87.03	291.4	.S..9..	9	P048N			1.47	.14	1.44			
D219	5.15	33.1	-57.22	18.8	S	9*	2.4			.039	.038	1.45			
A2335+29	23 35.16	29 51.2	104.50	322.9						.48	.09	.46			
MK328	5.03	33.1	-30.09	24.3						.050	.050				
A2335+31	23 35.4	31 43	105.25	324.9	.S..3*	3*	PG48C			.88	.00	.88			
	5.02	33.1	-24.34	24.4			1.6			.056	.053	.91			
A2335+30	23 35.74	30 25.9	104.85	323.5	.S..0..	0	PG48C			1.11	.25	1.05	0.65		
	5.03	33.1	-29.58	24.2			1.8			.042	.045	1.09	.06		
N7720	23 35.98	26 45.3	103.51	319.5	.L...P	-3*	P048C			1.28	.09	1.26	0.86		
	5.05	33.1	-33.07	23.8			2.0			.071	.071	1.31	.03		
15342	23 36.14	26 44.1	103.54	319.5	.E..0..	-5*	P048C			.57	.00	.57			
	5.05	33.1	-33.10	23.8			.7			.050	.050	.62			
N7721	23 36.23	-6 47.7	79.72	284.6	.SASS..	5	W060V			1.53	.34	1.45	*		
	5.14	33.1	-63.12	16.3	S S	3	3.1	S AF	3VS	.039	.028	1.47			
N7723	23 36.36	-13 14.2	69.25	278.3	.SBR3..	3	P200V			1.56	.14	1.53	1.10		
	5.20	33.1	-67.90	14.2	S 3 N	3	4.4	SR F	4 S	.040	.030	1.55	.03		
N7727	23 37.32	-12 34.2	70.95	279.0	.SKS1P..	1	W100V			1.62	.09	1.60	1.15		
	5.20	33.1	-67.62	14.2	S NT-*		4.0	S P	03VS	.045	.034	1.62	.04		
A2338-02	23 38.1	-2 53	85.29	288.6											
	5.16	33.1	-60.20	17.1											
A2338+26	23 38.2	26 33	103.99	319.4	.E..2...	-5	P048N			1.04	.10	1.02			
	5.06	33.1	-33.43	23.3			1.6			.051	.058	1.07			
A2338-13	23 38.4	-13 38	69.37	278.1						1.25	.39	1.16			
	5.20	33.1	-68.54	13.6						.075	.100				
N7731	23 39.0	3 28	91.61	295.1	.SB..1..	1	P048N			1.22	.10	1.20			
	5.14	33.2	-54.82	18.7			1.9			.039	.038	1.23			
N7732	23 39.1	3 27	91.64	295.1	.S..8P*	8*	P048N			1.30	.43	1.20			
	5.14	33.2	-54.85	18.7			1.7			.039	.038	1.22			
A2339-03A	23 39.22	-3 56.8	84.57	287.7	.S.S5P/	5*	P200C			1.20	.64	1.05			
	5.16	33.2	-61.24	16.5			2.9			.061	.058	1.07			
A2339-03B	23 39.45	-3 53.6	84.73	287.7	.S..3SP	3*	P200C			.84	.25	.78			
	5.16	33.2	-61.23	16.5			2.5			.061	.058	.80			
A2340-45	23 40.0	-45 27	335.68	248.5	.S..7*/	7*	R060V			1.47	.93	1.25			
	5.32	33.2	-67.33	1.1			2.4			.100	.063	1.27			
A2340+19	23 40.49	19 8.8	101.52	311.5	.I.....	10*	P048N			1.05	.19	1.00			
MK330	5.10	33.2	-40.58	21.7			1.5			.039	.038	1.01			
N7741	23 41.38	25 47.9	104.52	318.6	.SBS5..	6	P200V	R AF	2	1.60	.15	1.57	1.20		
	5.08	33.2	-34.37	22.5	SBS5	3	4.5		1	.031	.023	1.59	.02		
N7738	23 41.5	0 14	89.83	292.0	.SBS3..	3	P048N			1.35	.11	1.32			
	5.15	33.2	-57.06	17.2			2.2			.039	.038	1.34			
A2341-06	23 41.6	-6 27	82.56	285.4						1.42	.25	1.37			
	5.17	33.2	-63.64	15.2						.075	.100				
N7742	23 41.72	10 29.3	97.44	302.5	.SAR3..	3	P200V	S P GK*	5	1.31	.01	1.31	0.75		
	5.12	33.2	-48.75	19.7	F 0P		4.0		5 S	.040	.033	1.33	.04		
N7743	23 41.81	9 39.3	96.97	301.6	.RLBS... S 0*	-1	P200V	B GK	4	1.49	.07	1.47	*		
	5.13	33.2	-49.53	19.5			4.3		4	.036	.028	1.50			
N7744	23 42.4	-43 12	339.12	250.8	.LX...*	-3*	S030V			1.36	.11	1.33			
	5.29	33.2	-69.24	1.6			1.9		3 S	.158	.079	1.36			
A2342+06	23 42.6	6 46	95.40	298.7	.SBT3..	3	P048N			1.34	.02	1.34			
	5.14	33.2	-52.25	18.7			2.2			.039	.038	1.36			
11508	23 43.4	11 47	98.75	303.9	.S..8P*	8*	P048N			1.29	.52	1.17			
	5.12	33.2	-47.71	19.6			1.6			.039	.038	1.19			
N7750	23 44.1	3 30	93.62	295.5	.SBS6P*	6	PG48C			1.25	.25	1.19			
	5.14	33.2	-55.36	17.5			2.1			.039	.038	1.21			
N7752	23 44.46	29 10.7	106.50	322.4	.I..0..*	0*	P200C			.82	.23	.76			
	5.08	33.2	-31.35	22.2			2.5			.037	.035	.80			
N7753	23 44.56	29 12.2	106.53	322.4	.SXT4..	4	P200C			1.53	.18	1.49			
	5.08	33.2	-31.33	22.2			4.0		3 S	.038	.032	1.52			
N7755	23 44.79	-30 47.9	154.48	262.5	.SXT5..	5	P048C			1.57	.10	1.55	*		
	5.22	33.2	-75.68	5.9	SK3	3	2.6			.036	.032	1.57			
N7757	23 46.21	3 53.7	94.76	296.0	.SATS..	5	P200C			1.41	.03	1.40			
	5.15	33.2	-55.23	17.1			3.9			.036	.033	1.42			
A2346+25	23 46.28	25 56.4	105.84	318.9	.I..9..*	10*	P048N			1.23	.43	1.13			
D220	5.10	33.2	-34.57	21.4			8*			.039	.038	1.14			
A2346+05	23 46.4	5 52	96.22	298.0	.SBR6P*	6*	PG48C			.73	.00	.73			
	5.14	33.2	-53.45	17.5			1.3			.061	.058	.75			
N7764	23 48.29	-41 0.5	341.62	253.2	.IBS9..	10	R060V		1	1.19	.18	1.15			
	5.23	33.2	-71.54	1.4			2.6			.095	.060	1.16			
N7768	23 48.4	26 53	106.72	320.0	.E..2...	-5	P048N			1.22	.08	1.20			
	5.11	33.2	-33.80	21.1			1.9			.071	.071	1.25			
N7769	23 48.52	19 52.3	104.18	312.6	RSAT3..	3	W060V	S F	5	1.26	.01	1.26	*		
	5.12	33.2	-40.51	20.0	S S NT		2.9		5	.033	.027	1.29			
A2348+00	23 48.6	0 46	93.28	293.1	.S..3..*	3	P048N			1.30	.35	1.22			
	5.15	33.2	-58.31	15.6			1.8			.039	.038	1.24			
N7770	23 48.83	19 49.1	104.25	312.6	.S..0S.	0*	P048C			1.02	.05	1.01			
	5.12	33.2	-40.59	19.9			1.6			.037	.035	1.04			
N7771	23 48.87	19 50.0	104.27	312.6	.SBS1..	1	W060V	B *F		1.43	.33	1.35			
	5.12	33.2	-40.57	19.9			2.9		5	.032	.027	1.38			
A2348+20	23 48.89	20 18.5	104.47	313.1	.S..1..*	1*	P048N			.93	.17	.89			
MK331	5.12	33.2	-40.12	20.0			1.3			.039	.038	.92			
N7764A	23 50.79	-41 5.4	340.40	253.3	.S...P.		P074V			1.23	.19	1.19			
	5.21	33.2	-71.83	1.0			2.8			.105	.066	1.22			
N7779	23 50.89	7 35.8	99.03	300.1	PSA.0*	0	P048C			1.20	.10	1.18			
	5.14	33.2	-52.28	16.9			1.9			.037	.036	1.21			
N7780	23 51.0	7 50	99.21	300.3	.S..2..	2	P048N			1.08	.24	1.02			
	5.14	33.2	-52.07	16.9			1.5			.039	.038	1.05			
N7782	23 51.34	7 41.5	99.25	300.2	.SAS3..	3	W060V			1.38	.23	1.32			
	5.14	33.2	-52.24	16.8	S 3 N		2.9		03 S	.034	.028	1.34			
N7783.	23 51.6	0 6	94.02	292.6	.L...S.	-1*	P200C			1.28	.48	1.17			
	5.15	33.3	-59.24	14.7			3.2			.050	.050	1.20			
N7785	23 52.76	5 38.3	98.55	298.2	.E.S...*	-5	W100V			1.36	.22	1.31	.87		
	5.15	33.3	-54.28	15.9	E S*		3.3	D K	2	.056	.038	1.35	.04		
11515	23 53.6	-1 16	93.74	291.4	.SBR3..	3	P048N			1.09	.06	1.08			
	5.15	33.3	-60.69	13.9			1.7			.039	.038	1.10			
11516	23 53.7	-1 12	93.85	291.5	.S...4..	4	P048N			1.19	.02	1.19			
	5.15	33.3	-60.64	13.9			1.9			.039	.038	1.21			

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)
	m _H m _c (15)	B _T m.e. (16)	m _e m ₂₅ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _e m.e. (21)	(U-B) _e m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N ₁ N ₂ N ₃ (24)	α ₊ α ₋ (25)	Log S _H N ₁ A ₂₁ (26)	RI HI (27)	V N ₁ N ₂ m.e. (28)	V ₀ ΔV (29)	
1533A		15.0		.29	1.23	.53			1.01					16462	16693	
N7713A		.15	14.8	14.46	.06	.07			.54	3 0 0				0 1 105	231	
A2334+00				.23								.73		2678	2840	
A2335+29				.34								1 .01		1 0 10	162	
ZCG														1308	1559	
A2335+31				.35										0 2 70	251	
															254	S
A2335+30		14.75	13.5	.34	0.45	-.05	0.45	0.00	.33	1.08*	.825		-.33	240	492	
		.09	14.5	14.23	.1	.1	.1	.1	-.14	1 1 0				0 1 120	252	
N7720		13.65	13.4	.32	1.07	.1	1.08	.03	.91	2.91	.76		-3.86	8994*	9238	
		.05	14.7	13.18	.03					17 4 4	1.04			0 3 53	244	
1534?				.32												
N7721		12.4	12.30	.23	0.54	-.02	*	*	.41					2044	244	
		.09	13.9	11.79	.04	.04			-.11					0 1 27	133	
N7723		12.1	11.85	.22	0.71	0.07	0.77	0.16	.62					1860	1965	P
		.06	14.1	11.50	.03	.04	.02	.03	.00					0 1 38	105	
N7727		12.0	11.55	.22	0.85	*	0.92	0.44	.77					1821	1928	P
V 67		11.58	.09	14.3	.03		.03	.05						0 2 27	107	
A2338-02				.23										6985	7133	
32114				.31										0 1 185	148	S
A2338+26																
A2338-13				.22											242	
				.24											402	
N7731														2795	2967	
ZCG														0 1 185	172	
N7732				.24												
ZCG				.23											172	
A2339+03A														6852	6995	P
V 34				.23										0 2 19	143	
A2339+03B				.23										6966	7109	P
V 34				.25										0 2 19	143	
A2340+45				.27												
A2340+19														4109	4332	
														0 2 43	223	
N7741		12.6*	11.95	.31	0.56	-.13	0.58	-.08	.45			1.38*		779	1018	PT
		.06	14.4	11.52	.02	.03	.02	.03	-.21			1 .01	1.605	2 2 6	239	
N7738		11.81		.23												
A2341-06				.23											159	
N7742		12.7	12.25	.25	0.71	-.02	0.77	0.07	.64					1622	1818	
		.08	13.6	11.98	.03	.05	.04	.05	-.07					0 2 30	196	
N7743		12.8	12.2	.25	0.98		*		.90					1802	1995	PT
		.1	14.3	11.88	.05									0 1 65	193	
N7744		12.8		.24												
A2342+06		12.54	13.9	.24										5324	-37	
				.25										0 1 42	5506	
11508				.23											182	
N7750				.32										2883	199	
				.32										0 1 59	3053	
N7752				.32										4880	5125	P
42165=V S				.32										0 2 20	245	
N7753				.32										5083*	5328	P
42165=V S				.23	*	*	*	*						0 2 62	245	
N7755		12.5	*	.23	*	*	*	*						2923	2942	
		12.03		.23										0 2 32	19	
N7757			14.5	.23										3099	3269	P
A2346+25				.30										0 1 25	170	
A2346+05				.24								.48		800	1037	
												1 .02		1 0 10	237	
														3818	3995	
														0 1 30	177	
N7764		12.8	12.7	.24	.40	-.30			.29					1704	1675	
		.15	13.0	12.28	.06	.07			-.38					0 1 180	-29	
N7768		12.76		.31										7955	8193	S
N7769		12.9	12.8	.27	0.70	*			.61					0 1 120	238	
A2348+00		12.91	.13	13.9	.05									4349	4570	
				.23										0 1 74	221	
N7770				.27										8214	8371	
														0 1 21	157	
														4338	4558	
														0 1 76	220	
N7771		13.1		.27	.84				.68					4290	4510	
		.15	14.3	12.51	.06									0 2 53	220	
A2348+20				.27										5386	5608	
N7764A				.24										0 2 43	222	P
N7779				.24											-31	
N7780				.24										5125	181	
														0 1 58	5307	
N7782		13.1	13.1	.24											182	
		.15	14.3	12.64										5338	5519	
N7783		13.02		.23										0 1 20	181	
V20A														*		
N7785		12.9	12.60	.23	1.01	0.56	1.03	0.62	.92					3846	4019	P
		.07	13.8	12.31	.03	.03	.02	.03	.53					0 1 65	173	
11515		12.61		.22										6709	6855	
11516														0 1 34	146	
														7360	7506	
														0 1 43	146	

NGC IC, A MK, DDO (1)	Coordinates				Classification					Diameters			
	RA (1950) IOOP (2)	Dec IOOP (3)	L B (4)	SGL SGB (5)	Rev. type DDO type (6)	T L (7)	S(T) w (7)	Y type (1) Y type (2) (8)	Byu N BGC N (9)	Log D ₂₅ m.e. (10)	Log R ₂₅ m.e. (11)	Log(D10) Log Do (12)	Log A _e m.e. (13)
A2354-02 MK542	23 54.5 5.15	-2 22 33.3	93.16 -61.78	290.4 13.3									
A2355+47	23 55.0 5.13	47 10 33.3	113.57 -14.44	341.8 21.2						1.08 .051	.00 .058	1.08	
N7793	23 55.26 5.17	-32 52.1 33.3	4.53 -77.17	261.3 3.1	.SA58..	8	W100V 4.6	SI *AF	4VS	1.96 .032	.14 .022	1.93 1.94	1.50 .03
N7796	23 56.42 5.17	-55 44.1 33.3	317.90 -64.12	240.0 -5.2	.E+2...	-5	S030V 2.4		4 5	1.36 .224	.06 .105	1.35 1.39	
I1524	23 56.7 5.15	-4 26 33.3	92.20 -63.87	288.5 12.2						1.27 .075	.52 .100	1.15	
I1525	23 56.8 5.15	46 37 33.3	113.77 -15.05	341.2 20.8	.SR+3..	3	P048N 2.1			1.33 .039	.13 .038	1.30 1.36	
N7798	23 56.87 5.15	20 28.5 33.3	106.88 -40.49	313.6 18.2	.S.....		P048N 1.9			1.17 .039	.03 .038	1.17 1.20	
N7800	23 57.0 5.15	14 32 33.3	104.67 -46.21	307.5 17.0	.I+0.5.	05	P048N 2.3			1.41 .039	.14 .038	1.38 1.41	
A2357+47	23 57.5 5.15	47 0 33.3	113.97 -14.70	341.6 20.7	.SBT3..	3	P048N 2.3			1.38 .039	.07 .038	1.36 1.42	
N7805	23 58.88 5.16	31 9.3 33.3	110.60 -30.24	324.8 19.4	.LX+0*P	-2*	P200C 3.3			1.14 .042	.12 .045	1.12 1.16	
N7806	23 58.93 5.16	31 9.8 33.3	110.61 -30.23	324.8 19.3	.SAT4\$P	4	P200C 3.2			1.11 .039	.14 .038	1.08 1.11	
A2359+23A	23 59.1 5.16	23 13 33.3	108.42 -37.97	316.5 18.2	RS+R6*P	6*	P048N 2.1			1.39 .039	.22 .038	1.34 1.36	
A2359+23B	23 59.2 5.16	23 14 33.3	108.46 -37.96	316.6 18.1						1.25 .042	.44 .045	1.15	
A2359-15 D221	23 59.40 5.15	-15 44.6 33.3	75.86 -73.63	277.8 8.1	.IB59.. I	10 8	P048C 3.2			2.01 .039	.39 .032	1.91 1.92	1.65 .02

NGC, IC, A Zw, VV (14)	Magnitudes				Color Indices					Radio and 21 cm				Velocities		Appendices (30)	
	m _H m _C (15)	B _T m.e. (16)	m _g m ₂₈ (17)	A _B B _T (18)	(B-V) _T m.e. (19)	(U-B) _T m.e. (20)	(B-V) _g m.e. (21)	(U-B) _g m.e. (22)	(B-V) _T (U-B) _T (23)	Log S _R N _L N _H N ₊ (24)	α ₋ α ₊ (25)	Log S _H N A ₂₁ (26)	RI HI (27)	V N _H N ₀ m.e. (28)	V ₀ ΔV (29)		
A2354-02				.22											7500	7641	
A2355+47		15.2 .15		.58	1.30 .06	.36 .07				2.26 1 2 0	.555				0 1 200	141	
N7793	9.7 9.41	9.70 .12	12.7	.23	0.59 .05	-.10 .05	0.61 .02	-.09 .03	.51 -.16			2.20 1 .01	1.71		209	266	P
N7796	12.9 12.53		14.0	.27										2 2 9	214		
I1524			14.2	.22										3496	3396		
														0 1 150	-100		
I1525				.56												132	
N7798				.27												265	
N7800				.25											2715	2933	
A2357+47				.57										0 1 220	218		
N7805				.32												200	
V226				.32												265	P
N7806				.32												242	P
V226				.28	*	*										242	
A2359+23A				.28											4536	4760	
32125=V254				.28	.88 .06	.51 .07									0 1 56	224	
A2359+23B	14.4 .15			.28	.88 .06	.51 .07									4530	4754	
32125=V254	11.40 .06	15.1 15.3	.22 10.79	.22	0.40 .02	-.24 .05	0.36 .02	-.26 .03	.26 -.34			2.18 1 .02	.30		0 1 56	224	
A2359-15															-120	-38	T
														2 1 7	82		

NOTES AND REFERENCES

NOTES AND REFERENCES

- N7814 Pol. A.J., 70, 138, 1965. Astrofizika, 4, 409, 1968. Trudy Obs. Leningrad, 26, 48, 1969.
- A0003-19 = Mk 335. Seyfert, class 1.
Spec. Ap.J., 192, 581, 1974.
Dim. on PSS (0'4 x 0'4) used to reduce mag. and colors.
- N7828, 7829 = Arp 144 = VV72.
Ring: dim., descr., Ap.J., 194, 569, 1974.
- A0003-41 In a group. Note corr. coord.
Photo. Ap.Let., 2, 45, 1968. A.J., 76, 775, 1971.
Mag. P.A.S.P., 83, 310, 1971.
Rot., Mass, M/L, Ap.Let., 2, 45, 1968.
- A0004-06A,B = Arp 146. Ring: dim. Ap.J., 194, 569, 1974.
Ptm. U,B,V, Ap.J., 194, 569, 1974.
- N0001, 0002 = K2, Pair at 1'8.
- N7836 = UGC00065. Note large corr. to NGC coord. Misident. in UGC as Mk 338.
- N0009 N0008, a dble * was rejected. MCG 4-1-30 = N0009, not N0008 and N0009.
- N0014 = Arp 235 = VV80. B cent. part; resolved into *. $m_p = 12.5$ in MCG, vol.III, 1963.
- N0016 N0022 at 11'5 nf
- N0023 = Mk 545.
SN 1955c. P.A.S.P., 71, 162, 1959.
Radio. Aust.J.Phys., 19, 565, 1966.
- N0021 = MCG 5-1-46. Note large corr. to coord. See A.&A.Suppl., 12, 89, 1973.
- N0024 P(a) w. N 45 in background of Scl group?
- N0048 = MCG 8-1-31. N0049 = MCG 8-1-33.
- N0045 = DDO 223. Possibly in Scl group or P(a) w. N 24 in background.
HI 21 cm. Ap.J., 150, 9, 1967. Aust.J.Phys., 25, 315, 1972.
- N0051 = MCG 8-1-35.
- N0050 $m_p = 12.0$ in MCG, vol.III, 1963.
- N0055 Brightest in Scl group.
Photo. and descr. Vistas in Astr., 14, 211, 1972. J.R.A.S. Canada, 68, 117, 1974.
Ptm. Atl. Gal. Aust., 1968. Vistas in Astr., 14, 231, 1972.
Sptm. A.&A., 33, 331, 337, 1974.
Rot., mass. Vistas in Astr., 14, 231, 1972.
HI 21 cm. Ap.J., 142, 616, 1965. A.J., 69, 490, 521, 1964. Aust.J.Phys., 19, 111, 1966.
Radio. Aust.J.Phys., 16, 360, 1963; 19, 883, 1966. M.N., 152, 439, 1971.
- N0063 $m_p = 12.6$ in CGCG, vol.V, 1965.
- N0067A, 0067, 0068, 0069, 0070, 0071, 0072, 0072A = Arp 113. N 70 group. Obj. G,F,B,E,A,C,D,H, on chart in Ap.J., 193, 19, 1974.
- N0068 Ptm. U,B,V,R: Ap.J., 183, 731, 1973; 193, 19, 1974.
Lick 13 and Medd.Up. 21 dim. for N 70.
- N0070 = I1539.
- A0016-19 = DDO 1.
HI 21 cm. A.&A., 34, 43, 1974.
- I0010 Local Group.
Photo. P.A.S.P., 77, 272, 1965. Vistas in Astr., 14, 206, 1972. Ap.J., 194, 559, 1974.
Ptm. P.A.S.P., 77, 272, 1965. Vistas in Astr., 14, 231, 1972.
HI reg., Dist.Mod. Ap.J., 194, 559, 1974.
HI 21 cm. A.J., 69, 490, 521, 1964. Ap.J., 150, 9, 1967. A.&A., 18, 321, 1972; 31, 97, 1974.
Radio. A.J., 78, 18, 1973.
- N0078B = Mk 547 = K6b. In contact w. N0078A.
- N0080, 0083, 0091. In a group.
- N0080 Dia. Ap.J., 173, 485, 1972.
Ptm. V,B,R, Ap.J., 183, 731, 1973.
- N0083 = MCG 4-2-5 which is not = N0082 and N0083. N0082 is a * 5' n.
- N0095 = MCG 2-2-3. In MCG read 18 x 14 for D, not 18 x 4.
- N0091 = Arp 65 w. N0093 at 2'7 f.

A0022+29A Photo. P.A.S.P., 81, 224, 1969.
SN1968o, IAU Cir. No. 2092, 1968. Ast. Tsirk. No. 482, 1968. P.A.S.P., 81, 224, 1969.

A0022+29B Photo. P.A.S.P., 81, 224, 1969.
SN1968n, IAU Cir. No. 2086, 1968. P.A.S.P., 81, 224, 1969.

N0105 P(a?) w. ft. Sb(?) at 0'6 nnp.

N0124 In a group w. N 114, 118 (= III Zw 9), 120.

A0025+30A SN1972n and Photo. P.A.S.P., 85, 427, 1973.

A0026+02 In N 128 group. 5'6 n, 9'5p N 128.

N0125, 0126, 0127, 0128, 0130 In N 128 group.

N0127 Photo. and descr. Ap.J., 144, 875, 1966.

N0128 Photo. Ap.J., 144, 875, 1966.
 Ptm. Ap.J., 144, 875, 1966. V,B,R, Ap.J., 183, 731, 1973.
Rot. Comm. Padova, No. 18, 1972.

N0130 Photo. and Ptm. Ap.J., 144, 875, 1966.

N0131 P. w. N0134 at 9'4.

N0134 P. w. N0131 at 9'4.
Radio. Aust.J.Phys., 21, 193, 1968.

A0028-10 Descr. and Spec. Astrofizika, 10, 477, 1974.

N0145 = Arp 19.
Sptm. Univ. of Texas Dissert., Austin, 1972, (D. Wells, unpub.).
Rot., mass. Ast. Tsirk. No. 797, 1974.

A0029+31 SN1954d and Photo. P.A.S.P., 79, 456, 1967.

N0147 = DDO3. In M 31 group. P(a) w. N0185.
Photo., Dim. and Isodens. A.J., 79, 617, 1974.

N0151 = N0153.

N0150 Ptm. I.R.1-3.5μ: M.N., 164, 155, 1973.

A0031+30 SN1966i and Photo. P.A.S.P., 79, 456, 1967.

N0157 Sptm. Ap.J., 163, 249, 1971. A.&A., 27, 433, 1973.

A0032+36 And III. Descr. and Dim. Ap.J.Let., 171, L31, 1972.
Resol. in *. Ap.J.Let., 178, L99, 1972. Bull.A.A.S., 5, 5, 548, 1973.

N0160 N0162 is prob. *. F gal. 2'8 sff ident. as N0162 in RNGC.

A0033-10 SN1964j. IAU Cir. No. 1877, 1964.

N0163, 0165 Pair at 7'3.

N0169, I1559 = Arp 282 = K13. Pair in cont. Mk 341 = I1559, small Lp.
Radio. P.A.S.P., 86, 649, 1974.

A0034+25 B2 R.S. Comp. in contact.

A0035-34 Zwicky Obj. in Scl. B irreg. ring with central S(r) comp. and "spikes".
Descr. and Posit. A.J., 76, 775, 1971.

N0185 In M 31 group. P(a) w. N 147.
 Photo. Ap.J.Let., 183, L73, 1973. P.A.S.P., 86, 289, 1974. A.J., 79, 671, 1974.
Ptm. I2 col. Ap.J., 145, 36, 1966. 5 col. A.J., 73, 313, 1968.
B.V. Ann.Rev.Astr.&Ap., 9, 35, 1971. IAU Symp. No. 44, p.46, 1972.
Isodens., A.J., 79, 671, 1974.
Glob.clusters, P.A.S.P., 86, 289, 1974.
Planet.Neb. Bull.A.A.S., 5, 13, 1973; Ap.J.Let., 183, L73, 1973.

N0190 = III Zw 10, No. 2 = MCG 1-2-41, not MCG 1-2-42. Brightest in a compact group of 4, all at same vel.
Spec. A.J., 77, 4, 1972.

N0191, I1563 = Arp 127 = Ho 13a,b. P(b) at 0'8.

N0178 = I 39 In N 210 group. Asym. comp. SB(s)dm at 7'7.

N0194 In N0200 group. Diam. Ap.J., 173, 485, 1972.
Ptm. B,V,R, Ap.J., 183, 731, 1973.

N0193 = 4C 03.01 = PKS 0036+03.
Ptm. U,B,V, A.J., 74, 335, 1969 (+ comp. at 7' np). Ap.J., 178, 1, 1972.
Radio struc. Ap.J., 160, 17, 1970.

I1565 In Abell 76. Brightest E.
Ptm. V,V-r, A.J., 75, 695, 1970.

- N0198 In N0200 group.
- N0200 Brightest of group.
- N0201 $m_p = 12$ in MCG, vol.III, 1963.
- N0205 P(b) w. N 224 in M 31 group. MCG dims. for N0205 and N0221 are interchanged.
Photo. P.A.S.P., 78, 495, 1966. Observatory, 88, 91, 1968.
Ann.Rev.Astr. & Ap., 9, 35, 1971. Ap.J.Let., 183, L73, 1973.
Ptm. 12 col. Ap.J., 145, 36, 1966. 5 col. A.J., 73, 313, 1968.
U,B,V, IAU Symp. 44, p.46, 1972. P.A.S.P., 85, 286, 1973. 10 col. Ap.J., 179, 731, 1973.
Glob.clusters, Ap.J., 182, 671, 1973.
Sptm. Ap.J., 139, 532, 1965; 177, 285, 1972.
Pol. Astrofizika, 4, 409, 1968.
Rot.vel. A.&A., 8, 364, 1970.
Planet.Neb. Bull.A.A.S., 5, 13, 1973. Ap.J.Let., 183, L73, 1973.
HI 21 cm. up.limit, Observ., 83, 245, 1963. A.&A., 29, 335, 1973. M.N., 169, 607, 1974.
Radio. up.limit, Ap.Let., 11, 173, 1972; 13, 65, 1973.
- N0210 Brightest in a group.
Rot.vel. A.&A., 8, 364, 1970.
SN1954r and Photo. P.A.S.P., 85, 427, 1973.
- A0038-21 = Haro 12 (Bol. Tonantzintla No.14, June 1956).
 Blue compact w. short jets on opposite sides.
 D x d: 0'32 x 0'24. Extens. 0'57 x 0'34.
- A0038-01 QSO 4C-02.04 at 1'2 (z = 1.69). Id. chart. M.N., 162, 21P, 1973.
- N0216 = Haro 13 (Bol. Tonantzintla No.14, June 1956).
 Similar to N5253, e F extens. 3'1 x 0'9.
Descr., dim. A.J., 75, 1143, 1970.
- I0043 SN1973u and Photo. P.A.S.P., 86, 516, 1974. IAU Cir.No. 2620, 1974.
- A0039+40 = And IV. Descr. and Dim. Ap.J.Let., 171, L31, 1972.
HI 21 cm. M.N., 169, 607, 1974.
- N0221 = M 32 = Arp 168. P.w. N 224 in M 31 group.
Descr., nucl. Bull.A.A.S., 3, 445, 1971.
Photo. P.A.S.P., 78, 495, 1966. Ap.J.Let., 183, L73, 1973.
Ptm. 12 col. Ap.J., 145, 36, 1966. 5 col. A.J., 73, 313, 1968.
U,B,V, Ap.J., 157, 55, 1969. M.N., 162, 359, 1973. 10 col. Ap.J., 179, 731, 1973.
I.R. 2-10μ. Ap.J.Let., 175, L95, 1972. M.N., 162, 359, 1973.
Spec., vel. disp. IAU Symp. 15, p.112, 1962. Ap.J., 176, 91, 1972. IAU Symp. 58, p.20, 1974.
Sptm. Ap.J., 139, 532, 1964; 141, 109, 1965; 154, 21, 1968; 164, 11, 1971; 175, 649, 1972.
Mem.S.A.Ital., 43, 263, 1972.
Pop. models. Ap.J.Suppl., 22, No.193, 1971. Ap.J., 171, 463, 1972.
A.&A., 20, 361, 1972. Univ. of Texas Dissert., Austin, 1972.
Pol. Astrofizika, 4, 409, 1968.
Dyn., mass, M/L. Ap.J., 139, 284, 1964; 176, 91, 1972; 179, 423, 1973.
III reg. and Planet. Neb. Bull.A.A.S., 5, 13, 1973. Ap.J.Let., 183, L73, 1973.
HI 21 cm up. limit, Observ., 83, 245, 1963. A.&A., 29, 335, 1973. M.N., 169, 607, 1974.
Radio up. limit, Ap.Let., 11, 73, 1972; 13, 65, 1973. A.&A., 34, 173, 1974.
- N0224 = M 31, brightest in M 31 (Local) group.
 F companions: Ap.J.Let., 171, L31, 1972. And I = A0043+37,
 And II = A0113+33, And III = A0032+36, And IV = A0039+40.
Photo. Ap.J., 139, 1056, 1964. P.A.S.P., 78, 367, 496, 1966. A.J., 72, 65, 1967.
A.&A., 9, 181, 1970. Ap.Let., 11, 173, 1972. Ap.J.Let., 174, L71, 1972. Ap.J., 179, 445, 1973.
Nucl. Ap.J., 140, 1467, 1964; 170, 25, 1971; 194, 257, 1974. "Nuclei of Galaxies", p.271, 1971.
IAU Symp. 58, p.336, 1974.
Ptm. U,B,V, Ap.J., 142, 1376, 1965; 143, 187, 1966; 157, 55, 1969; 194, 257, 1974.
A.J., 71, 867, 1966. A.&A., 12, 1, 1971. Bull.A.A.S., 4, 332, 1972.
 12 col. Ap.J., 146, 36, 1966. 5 col. A.J., 73, 313, 1968. 10 col. Ap.J., 179, 731, 1973.
Pg. Isoph. P.A.S.P., 82, 1032, 1970.
I.R. 1-25μ. Ap.J., 138, 1317, 1963; 143, 187, 1966. Ap.J.Let., 159, L165, 1970.
Bull.A.A.S., 1, 248, 1969.
Absorpt., Col. exc. A.J., 72, 526, 1967; 74, 1000, 1969. A.&A., 24, 47, 1973.
Resolution, modulus: A.J., 72, 526, 1967; 72, 65, 69, 1967.
OB*: Ap.J.Suppl., 9, No.86, 1964. A.J., 71, 219, 1966. IAU Symp. 38, p.39, 1970.
A.N., 292, 103, 1970; 292, 275, 1971; 294, 79, 1972.
Var.*, Novae, Ceph., IAU Cir. No. 1878, 1964. A.J., 69, 610, 1964; 70, 212, 1965;
 72, 1356, 1967. Coll. Int. C.N.R.S., Paris, p.125, 1965. Ast. Tsirk., Nos 560, 579,
 1970. Sov.A.J., 12, 265, 1968; 15, 1001, 1972. Inf.Bull.V.S., No. 622, 1972.
Ast. Tsirk., No. 799, 1973. A.&A., 22, 453, 1973. A.&A.Suppl., 9, No.3, 1973.
Dist.mod.(from Ceph.): Sov.A.J., 7, 293, 1963. Bull.A.A.S., 3, 398, 1971.
Glob.Clust., Vet.Pub. Astr. Inst. Univ. Brno., No.5, 1966. Bull.A.A.S., 1, 208, 1969.
J.R.A.S. Canada, 63, 95, 1969. Ap.J.Suppl., 19, No.171, 1969. Sov.A.J., 12, 116, 1968;
 17, 174, 1973.
Spec. Descr. and Photo. A.J., 74, 515, 1968.
Internal mot., IAU Symp. 29, p.71, 1968. Ap.J., 159, 379, 1970; 181, 61, 1973.
Vel. disp., IAU Symp. 15, 112, 1962. Bull.A.A.S., 4, 315, 1972. Ap.J., 180, 705, 1973.
IAU Symp. 58, p.20, 1974.
z of background Obj., Sov.A.J., 18, 144, 1974.
 (Continued)

N0224 Continued.

- Sptm. Ap.J., 139, 532, 1964; 141, 109, 1965; 154, 21, 1968; 163, 249, 1971; 164, 11, 1971; 170, 25, 1971; 177, 31, 1972. A.J., 74, 150, 1969. P.A.S.P., 82, 760, 1970. IAU Symp. 44, p.49, 1972. D.Wells, Univ.Texas.Dissert., Austin, 1972. Mem.S.A.Ital., 43, 263, 1972. Bull.A.A.S., 4, 230, 1972; 6, 442, 1974. A.&A., 26, 95, 1973; 27, 433, 1973. IAU Symp. 58, p.169, 1974.
- Near UV: IAU Symp. 56, p.130, 1970.
- Far UV: P.A.S.P., 81, 475, 1969. N.A.S.A., SP 310, pp.559, 575, 1972.
- Pop. models: P.A.S.P., 78, 380, 1966. Ap.J.Suppl., No.193, 1971. Ap.J., 175, 649, 1972. A.&A., 20, 361, 1972; 33, 177, 1974.
- Glob. Clust.: Ap.J., 171, 403, 1972.
- Molec. abs. 2.1, 2.3u(H₂O,CO), Ap. Let., 14, 1, 1973.
- Pol. Astrofizika, 4, 409, 1968.
- Dyn., rot., mass, M/L, Ap.J., 142, 1376, 1965; 159, 379, 1970; 170, 25, 1971; 180, 605, 1973; 184, 735, 1973; 190, 283, 1974; 194, 257, 1974. IAU Symp. 38, pp.42, 61, 1970.
- Tartu Obs. Pub. No.26, 23, 1970. P.A.S.P., 86, 861, 1974.
- Mass models, Astrofizika, 4, 364, 1968; 5, 317, 1969; 6, 149, 241, 1970.
- Kin., Tartu Obs. Pub. No.36, 55, 1972. IAU Symp. 44, p.37, 1972.
- HII reg., Ap.J., 139, 1027, 1964; 159, 379, 1970; 163, 431, 1971; 179, 445, 1973.
- at 10, 20u: Ap.J. Let., 193, L7, 1974. Radio, IAU Symp. 60, p.229, 1974.
- Interfer. H α , A.&A., 1, 208, 1969. IAU Symp., 60, p.229, 1974.
- SN1885a, Search at 2695 Mhz, Bull.A.A.S., 5, 322, 1973.
- HI 21 cm., A.N., 288, 19, 1964. A.J., 70, 669, 1965. Ap.J., 141, 750, 1965; 144, 639, 1966; 175, 347, 1972. Science, 153, 411, 1966. M.N., 133, 359, 1966; 149, 237, 1970; 165, 9P, 1963; 169, 607, 1974. Mem. R.A.S., 74, 43, 1970. Ap.Let., 4, 47, 1969. IAU Symp. 44, p.12, 1972.
- A.&A. Suppl., 12, No.12, 1973. A.&A., 30, 353, 1974.
- Companion at 1 $^{\circ}$ 5, IAU Symp. 58, p.122, 1974.
- Radio., Ann. Ap., 26, 343, 1963. Nature, 198, 844, 1963; 202, 269, 1202, 1964; 207, 587, 1965; 214, 1190, 1967. A.J., 69, 374, 1964; 70, 324, 1965; 72, 809, 1967; 77, 637, 1972.
- Science, 145, 389, 1964; 156, 1087, 1967. Observ., 85, 24, 1965. Ap.J., 142, 1333, 1965; 144, 559, 1966. Ap. Let., 1, 133, 1968; 11, 173, 1972; 13, 169, 1973. M.N., 144, 101, 1969.
- Bull.A.A.S., 3, 445, 1971; 5, 29, 1973. A.&A., 34, 173, 1974.
- X-rays, Ap.J., 179, 375, 1973; 190, 285, 1974.
- A0043+37 = And I. Descr., dim., Photo. Ap.J.Let., 171, L31, 1972.
- Mag., IAU Cir. No. 2366, 1971. Ap.J.Let., 171, L31, 1972.
- Ptm., Bull.A.A.S., 5, 448, 1973. Ap.J., 191, 271, 1974.
- B,V: P.A.S.P., 86, 336, 1974.
- Dim. on PSS (3'S: x 2'5: blue, 5'5: x 4'5: red) used to reduce mag. and colors.
- N0244 = Haro 14 (Bol. Tonantzintla No.14, June 1956).
- Descr., dim., Spec. A.J., 75, 1143, 1970.
- A0044+32 = K17a
- N0247 In ScI group.
- HI 21 cm., A.&A., 23, 295, 1973. Search for halo, A.&A., 28, 95, 1973.
- HII reg., dis. mod., Ap.J., 194, 559, 1974.
- Dyn., mass, Proc. A.S.Aust., 1, 288, 1969.
- N0253 In ScI group.
- Photo., Ap.J., 159, 799, 1970. A.&A., 12, 379, 1971. Ap.J.Let., 181, L27, 1973.
- J.R.A.S. Canada, 68, 117, 1974.
- Ptm. Atl.Gal.Aust., 1968.
- I.R. 1-20u: Ap.J.Let., 176, L95, 1972; 181, L27, 1973. M.N., 164, 155, 1973.
- 100, 350u: Ap.J.Let., 182, L89, 1973; 183, L67, 1973.
- Spec. Ap.J., 159, 799, 1970.
- Sptm. A.&A., 33, 331, 337, 1974.
- Molec. abs. OH: Ap.J.Let., 167, L47, 1971. Ap.Let., 15, 211, 1973.
- H₂CO: Nature, 247, 526, 1974.
- Dyn., mass, Proc. A.S.Aust., 1, 288, 1969.
- Interfer. H α in disk: A.&A., 12, 379, 1971.
- SN1940e. IAU Cir. No.848, 1941.
- HI 21 cm. A.&A., 17, 207, 1972; 23, 295, 1973.
- Radio. Ann. Ap., 26, 343, 1963. Aust.J.Phys., 16, 360, 1963. Sov.A.J., 13, 881, 1970.
- M.N., 152, 439, 1971. Ap.Let., 12, 75, 1972. Ap.J.Let., 181, L27, 1973.
- Proc. A.S. Aust., 2, 159, 1972.
- A0045-20A,B 2 brightest members of a chain of gal. nf N 247.
- Photo. Ap.J., 185, 797, 1973.
- A0045-10 = Ho 21a.
- N0252 = Ho 23b. Brightest in a small group.
- N0259 = Ho 22a. vF anon. at 3'5 (not = Ho 22b which is a *).
- N0260 = Ho 23c. In multiple system w. N0252 (N0258 = Ho 23d).
- N0262 = Mk 348. Seyfert, class 2.
- Spec. Photo. Ap.J., 192, 581, 1974.
- Radio. (var.) Ap.J.Let., 191, L13, 1974. P.A.S.P., 86, 649, 1974.
- A0046-12 = Haro 15 (Bol. Tonantzintla No.14, June 1956) is not = N0263 which is 23' s.
- Descr., dim. A.J., 75, 1143, 1970.
- Spec. A.J., 75, 1143, 1970. Astrofizika, 10, 477, 1974.
- N0266 m_p = 12.6 in CGCG, vol. VI, 1968.

A0047-21 = DDO 6. HI 21 cm. A.&A., 34, 43, 1974.

N0271 $m_p = 12$ in MCG, vol.III, 1963. $m_p = 13.2$ (CGCG, vol.V, 1965).

N0273 In group w. N0274-0275.

N0274, 0275 = Arp 140 = VV 81 = Ho 26b,a. Interacting pair at 0'8.

N0275 Rot., mass, Ast. Tsirk., No.797, 1974.
HI 21 cm. A.J., 79, 767, 1974.

I0056 Descr., Spec. Astrofizika, 10, 477, 1974.

N0278 Ptm. 5 col. A.J., 73, 313, 1968.

I0056A Descr., dim., Spec. Astrofizika, 10, 477, 1974.

A0049-16 S pec. $m_p = 15.1$.
SN1955d, Bol. Tonantzintla, No.17, April 1958.

N0289 Radio. Aust.J.Phys., 19, 883, 1966.

A0051-73 Small Magellanic Cloud. Local Group. P(b) w. LMC.
Reviews and References: Symp. on the Magellanic Clouds, Mt.Stromlo Obs. 1965.
"The Magellanic Clouds", Ap. & Space Sc. Lib., vol. 23, 1971. Vistas in Astr., vol.12, 335, 1970;
vol.14, 163, 1972. "The Magellanic Clouds. A Bibliography, 1951-1972", Carter Obs. Astr. Bull.
No. 79, 1973.

N0300 In ScI group.
Photo. Zs.f.Ap., 64, 212, 1966.
Ptm. Atl. Gal. Aust., 1968.
Dyn., mass, M/L, A.&A., 16, 165, 1972.
HI 21 cm. Ap.J., 142, 616, 1965; 150, 9, 1967. Aust.J.Phys., 20, 131, 1967.
HII reg. Zs.f.Ap., 64, 212, 1966.
Interfer. Ho in disk: A.&A., 12, 379, 1971.
Radio. M.N., 152, 439, 1971.

N0309 = Ho 27a. Ho 27b at 4'1. I1602 at 13'5 sp.

N0321 was A0055 in BGC where the coord. were in error.
SN1939d. Ap.J., 96, 28, 1942.

N0315 B2. R.S. = Ho 29a. N0313, 316 (= Ho 28c,b) are **. N0311 5'5 sp. N0318 5'5 nf.

N0327, 0329 = Ho 30a,b. Pair at 3'8, F anon. spindle 2' np.

N0326 = IV Zw 35 = 4C 26.03 = PKS 0055+26. Close pair of compacts in common halo = MCG 4-3-25, not
MCG 4-3-24.
Spec. z of each comp.: Ap.J.Let., 182, L13, 1973.

A0056-19 $m_p = 12$ in MCG, vol.IV, 1968.

A0057+31 = Mk 352. Seyfert, class 1.
Spec. Photo. Ap.J., 192, 581, 1974.
Ptm. Source WE, log A = 0.40, V = 14.81, B-V = 0.44, U-B = -0.66.

N0337 Mass, M/L, Bull.A.A.S., 1, 186, 1969.

A0057-33 ScI system. E dwarf in Local Group.
Ptm. Ap.J., 142, 1390, 1965. A.J., 71, 204, 1966.
Dyn., mass, Ap.J., 144, 869, 1966. A.J., 71, 204, 1966; 74, 587, 1969.
Ann. Rev. Astr. & Ap., 9, 35, 1971.

N0337A Dwarf Spiral 26'6 sf N0337.

A0059+30 = I Zw 2. Compact w. short jet.

N0354 = Mk 353 = UGC 00645. UGC 00641 = NGC 353 misident. as Mk 353.

N0357 Brightest in a group of 10 in 12' circle. N0355 at 6'3.

N0365 SN1970n, and Photo. P.A.S.P., 83, 478, 1971.

I1613 = DDO 8. Dwarf in Local Group.
Descr., dim. Ap.J., 166, 13, 1971.
Photo. Ap.J., 166, 13, 1971. Pub. U.S. Nav. Obs., XX, Part IV, 1971.
Vistas in Astr., 14, 207, 1972.
Ptm. Pub.U.S. Nav. Obs., XX, Part IV, 1971. Ann. Rev. Astr. & Ap., 9, 35, 1971.
Vistas in Astr., 14, 231, 1972.
Var.*, Cepheids, Dist. modulus, Ap.J., 166, 13, 1971; 191, 603, 1974. P.A.S.P., 85, 119, 1973.
HI 21 cm. IAU Symp. 44, 12, 1972.
HII reg. Ap.J., 166, 13, 1971; 190, 525, 1974. Bull. A.A.S., 5, 349, 1973.

A0102-06 = H.A. 88.2, New I. Anon. SB sp at 4'0.
HII reg., Dist.mod. Ap.J., 194, 559, 1974.

A0103+31 SN1960p and Photo. P.A.S.P., 73, 175, 1961. (vel. ~ 4500 km s⁻¹, unconfirmed).

N0375, 0379, 0380, 0382, 0383, 0384, 0385, 0386, 0388 = Arp 331 = IV Zw 38. Chain of E, L.

N0375 MCG 5-3-49 ≠ N 375. N 375 not in MCG.

N0383 = 3C 31. Brightest in chain. N0382+83 = VV 193 = K23.
Descr., dim. P.A.S.P., 80, 129, 1968, Ap.J., 173, 485, 1972.
Photo. Ap.J., 163, 195, 1971. A.J., 79, 671, 1974.
Ptm. V,B,R, A.J., 75, 695, 1970. Ap.J., 178, 1, 1972; 183, 731, 1973.
Isodens. Ap.J., 163, 195, 1971. A.J., 79, 671, 1974.
Radio. Observ., 87, 124, 1967. Ap.J., 157, 481, 1969. Ap.J.Let., 182, L17, 1973.
A.J., 78, 13, 1030, 1973.

A0106+01 QSO 4C +01.2 at 3'2 (z = 2.107. Ap.J., 175, 601, 1972).

I0079 Brightest in a group.

I0080A,B Close dble. In Abell 151. I0080A,B = MCG -3-4-8, -3-4-9 (I0080 ≠ MCG -3-4-12).
Diam. Ap.J., 173, 485, 1972.
Ptm. U,B,V: Ap.J., 178, 1, 1972. V,V-r: A.J., 75, 695, 1970.
 $B_T(A+B) = 14.7 \pm 0.2$, $(B-V)_T(A+B) = 1.06 \pm 0.05$ reduced using dim. measured on PSS(0'8: x 0'7:).

N0403 N 400, 401, 402 are *. N 398 7'8 sp. Anon. 2'7 sf.

N0404 Possibly in Local Group.
Ptm. Reports of var. obj. in Inf. Bull. V.S., Nos. 614, 636, 638, 648, 1972; IAU Cir. 2380, 1972, were in error, see IAU Cir. 2382, 1972. 5 col. A.J., 73, 313, 1968.

A0107+32 SN1961m and Photo. P.A.S.P., 74, 215, 1962 (where the gal. is erroneously class. as EO).

A0107+42 = K 24a.

N0407 In group of E,L w. N0410, 414.

N0410 In group w. N0407-414 (N0414 = IV Zw 39, dble compact).

N0428 HII reg. and Dist. modulus, Ap.J., 194, 559, 1974.

N0434, 0434A Prob. interacting pair at 3'1.

N0440 Pair w. N0434 at 5'1.

I1653 Sp. w. compact core.

N0447 = I1656 = UGC 00804. Large SBa 6'2 sp N0449 (= Mk 1). Ident. error in CGCG, RNGC, UGC.

N0450 = K 27a.

N0449 = Mk 1. N 451 (= I1661) is companion 2'1 sf. N 453 at 4'2 sf is a triple *. Seyfert, class 2.
Photo. Astrofizika, 4, 587, 1968.
Ptm. A.N., 293, 175, 1972. 10μ (up. limit) Ap.J.Let., 176, L95, 1972.
Spec., A.J., 73, 891, 1968. Ap.J., 159, 405, 1970; 192, 581, 1974.
Sptm. Astrofizika, 7, 389, 1971. IAU Symp. 44, p.143, 1972.
Radio. P.A.S.P., 86, 649, 1974.

A0113+33 = And II. Descr., dim., Ap.J.Let., 171, L31, 1972.
Photo. Ap.J., 191, 271, 1974.
Resolution. Bull.A.A.S., 5, 448, 1973. Ap.J., 191, 271, 1974.

N0467 In group w. N0470, 0474.
Sptm. D. Wells, Univ. Texas Dissert., Austin, 1972, unpub.

N0470 = MCG 0-4-84 where d and D are interchanged. In group w. N0467-474. P(a) w. N 474 at 5'5 (see Arp 227).
Sptm. D. Wells, Univ. Texas Dissert., Austin, 1972, unpub.

N0474 = Arp 227. P(a) w. N0470 at 5'5.

A0118+15 SN1936b. P.A.S.P., 51, 36, 1939. Ap.J., 96, 28, 1942.

N0493 SN1971s. IAU Cir. No. 2371, 1971; 2389, 1972. Ast. Tsirk. No.666, 1971. Yamamoto Cir. No.1744, 1971; No.1751, 1972. "Supernovae & Supernovae Remnants", Ap.& Space Sc.Lib., Vol.45, p.26, 1974.
X-rays (up. limit). Bull.A.A.S., 6, 269, 1974.

N0497 = Arp 8. Pec. broken arm on np side.

A0119+26A,B = Mk 355, 356. Close pair at 0'4.

N0495, 0499, 0507, 0508. In group or cluster, N0507 the brightest.

N0499 = I1686.

A0120+34 = I Zw 4 = II Zw 2.
Photo. Ap.J., 140, 1467, 1964.
Ptm. U,B,V: P.A.S.P., 82, 685, 1969.

N0507 = Arp 229 = VV 207. B2 R.S. Brightest in cluster. N0508 1'5 n. N0504 4'0 sp. Extensive halo.
Dim., Ap.J., 173, 485, 1972.
Ptm. U,B,V,R: Ap.J., 178, 1, 1972; 183, 731, 1973. A.J., 75, 695, 1970.

N0509 N0505 at 6'9 np.

N0519 ≠ MCG 0-4-116. N0519 not in MCG.

N0521 SN1966g. and Photo. P.A.S.P., 79, 456, 1967. IAU Cir. No.1966, 1966.

N0520 = Arp 157 = VV 231 = K 31. I0p or coll. pair of early spirals.
Descr., class. Astrofizika, 3, 427, 1967. A.J., 79, 1242, 1974.
Photo. Ap.J., 148, 321, 1967. Astrofizika, 9, 157, 1973. Cont. Asiago Obs. No.300bis, p.79, 1973.
Ptm. Bull.A.A.S., 5, 447, 1973. 2.2μ (up.limit): M.N., 164, 155, 1973.
Spec., Photo. Astrofizika, 9, 157, 1973. Vel. blue obj. nearby (z=0.116). Astrofizika, 10, 298, 1974.
Internal mot., Astrofizika, 9, 157, 1973.
HI 21 cm. A.J., 79, 767, 1974.
III reg. Ap.J.Suppl. 27, No.239, 1974.
Radio. Aust.J.Phys., 21, 193, 1968, M.N., 167, 251, 1974.

N0530, I1696 In 545-547 cluster (= Abell 194).

N0530 = IC 106 = MCG 0-4-119, not MCG 0-4-122.

N0523 = Arp 158 = IV Zw 45. Possibly P(c). Compact core.
Photo. and Isodens. P.A.S.P., 85, 568, 1973.
Spec., internal mot. P.A.S.P., 85, 568, 1973.

N0535, 0541, 0543, 0545, 0547, 0548 In cluster (Abell 194).

N0541 = Arp 133. Pec. distorted system 0'8 nf.

N0545, 0547 = 3C 40 = Arp 308 = K 32. N0545 = MCG 0-4-142, not MCG 0-4-140. N0547 = MCG 0-4-143.
Brightest pair in cluster.
Descr., class.: cD4, Ap.J., 140, 35, 1964. Chain of gal.: P.A.S.P., 80, 129, 1968.
Photo. Ap.J., 139, 269, 1964; 163, 195, 1971.
Ptm. of 85 obj. (NGC, IC, A.): Ap.J., 139, 269, 1964.
U,B,V,R: A.J., 75, 995, 1970. Ap.J., 178, 1, 1972; 183, 731, 1973.
Isodens. of field: Ap.J., 163, 195, 1971.
Spec. of 52 obj.; Ap.J., 139, 269, 1964.
Dyn., mass, Ap.J., 139, 269, 1964.
Radio. A.J., 73, 1, 1968; 79, 903, 1974.

N0536 SN1963n and Photo. P.A.S.P., 76, 325, 1964. Ann. Ap., 27, 300, 1964.
Coll. Int. Novae & Supernovae, CNRS, Paris, p.179, 1965.

A0123+06 = Ho 43a. (Ho 43b is a *). $m_p = 12.5$ in MCG, vol.III, 1963.

A0123+31 = Mk 358. Seyfert, class 1.
SN1969j. and Photo. P.A.S.P., 82, 736, 1970.
Ptm. U,B,V: Ap.J., 192, 581, 1974.

I1703 In cluster (Abell 194).
SN1963e. Ap.J., 139, 269, 1964. w. Photo., P.A.S.P., 76, 325, 1964.

N0550 SN1961q and Photo. P.A.S.P., 74, 215, 1962.

I0115 In cluster (Abell 195) = 4C 18.06 = PKS 0124+18 = MCG 3-4-39.

N0560, 0564, I0119, I0120. In a group.

N0564 = Ho 44a. (Ho 44b at 0'8 is prob. a *).
Diam. Ap.J., 173, 485, 1972.

N0565, 0570, I0120 In cluster (Abell 194).

I0127 In a group w. N 584, 586, 596.

N0584 = I1712 = Ho 45b (Ho 45c is a *) = PKS 0129-07. In a group.
Ptm. B,Y: Pub. Byurakan Obs. No. 42, 3, 1970. 10 col.: Ap.J., 179, 731, 1973.

N0586 = Ho 45a. In a group.
Ptm. B,Y: Pub. Byurakan Obs. No. 42, 3, 1970.

N0596 In a group. Distorted corona w. F "tail" to sp. Similar to N7135.
Ptm. B,Y: Pub. Byurakan Obs. No. 42, 3, 1970. 10 col.: Ap.J., 179, 731, 1973.

N0600 Ptm. B,Y: Pub. Byurakan Obs. No. 42, 3, 1970.

N0598 = M 33. Local Group.
Spir. struc. A.J., 69, 744, 1964. P.A.S.P., 79, 119, 1967.
A.&A., 11, 468, 1971. Ap.J., 164, 411, 1971; 191, 317, 1974.
Photo. A.J., 69, 744, 1964. Ann.Ap., 28, 683, 1965. P.A.S.P., 79, 119, 1967. IAU Symp. 29, p.434, 1968. IAU Symp. 38, p.73, 1970. A.&A., 11, 468, 1971; 12, 379, 1971; 29, 231, 1973; 33, 161, 1974; 37, 33, 1974. Ap.J., 179, 445, 1973; 190, 525, 1974; 191, 63, 1974.
Ptm. U,B,V, A.J., 69, 744, 1964. A.&A., 5, 13, 1970. Ap.J., 164, 411, 1971. Bull.A.A.S., 4, 332, 1972; 5, 348, 1973. Ap.J., 191, 63, 1974.
5 col. A.J., 73, 313, 1968. IR: M.N., 162, 359, 1972.
Absorpt., col. exc. A.J., 72, 526, 1967; 74, 1000, 1969. Ap.J., 191, 63, 1974.
Modulus, A.J., 72, 526, 1967. Ap.J., 191, 603, 1974.
Star cts. Ap.J., 191, 317, 1974.
Wolf-Rayet * Bull.A.A.S., 3, 240, 1971. Ap.J., 172, 577, 1972.
Var. *, Novae, A.&A., 22, 453, 461, 1973. (Continued)

- N0598 Continued
Spec. Internal mot., A.J., 69, 744, 1964.
Sptm. Sov. A.J., 16, 628, 1973. Ap.J.Let., 193, L49, 1974.
 Far UV: N.A.S.A., SP 310, 559, 1972.
Pol. Astrofizika, 4, 409, 1968.
Dyn. rot., mass, M.N., 129, 313, 1964. Ann. Ap., 31, 63, 1968. A.&A., 9, 350, 1970.
 Ap.Let., 8, 17, 1971. Ap. Space Sc., 29, 61, 1974. Cont. Asiago Obs. No. 300bis, p.109, 1973.
 HI 21 cm. A.J., 73, 514, 1968. Ap.Let., 4, 47, 1969; 7, 209, 1970. Mem.R.A.S., 74, 123, 1970.
 M.N., 153, 9, 1971; 155, 337, 1972; 163, 163, 1973. IAU Symp. 44, p.12, 67, 1972.
 A.&A.Supp., 7, No.4, 1972. Ap.J., 169, 235, 1971; 179, 453, 1973. IAU Symp. 58, p.122, 1974.
 HII reg. Ann. Ap., 28, 633, 1965. Ap. Space Sc., 4, 327, 1969. Ap.J., 179, 445, 1973; 190, 525, 1974. A.&A., 37, 33, 1974.
Spec. M.N., 129, 309, 1964. Ap.Let., 8, 17, 1971.
Sptm. A.J., 72, 783, 1967. Ap.J., 151, 491, 1968; 159, 809, 1970; 161, 33, 1970; 168, 327, 1971. P.A.S.P., 82, 636, 1970. Bull.A.A.S., 5, 349, 448, 1973. A.&A., 28, 447, 1973; 33, 61, 1974.
 H₂O (up. limit): Ap.J., 169, 207, 1971. 10, 20μ: Ap.J.Let., 193, L7, 1974.
 1415 MHz: A.&A., 32, 363, 1974.
Interfer. Hα, Ann. Ap., 31, 63, 1968. A.&A., 9, 181, 1970; 12, 379, 1971; 28, 447, 1973; 33, 161, 1974. IAU Symp. 60, p.249, 1974.
Radio. Ann. Ap., 26, 343, 1963. P.A.S.P., 75, 404, 1963. Ap.J., 142, 1333, 1965; 174, 293, 1972. Sov. A.J., 13, 881, 1970. M.N., 155, 337, 1972. Bull.A.A.S., 5, 29, 1973. A.&A., 29, 231, 1973; 32, 363, 1974.
- N0612 = PKS 0131-36. In a cluster.
Photo. Aust.J.Phys., 19, 181, 1966.
Ptm. U,B,V, A.J., 74, 335, 1969 (+ companion at lh 33.9, -36 30.9). Ap.J., 178, 1, 1972.
 Dim. on PSS (1'2 x 0'8) to reduce mag. and colors.
- N0613 Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967; 81, 51, 1969.
Photo. Ap.J., 140, 85, 1964; 192, 279, 1974. P.A.S.P., 77, 287, 1965; 81, 51, 1969.
Ptm. Atl. Gal. Aust., 1968. I.R.: M.N., 164, 155, 1973. U,B,V, Ap.J., 192, 279, 1974.
Sptm. Ap.J., 192, 279, 1974.
Rot. mass., Ap.J., 140, 85, 1964.
 HII reg. Ap.J., 155, 417, 1969. "Atlas and Catalogue", Univ. Washington, Seattle, 1966.
- N0615 Ptm. B,Y: Pub. Byurakan Obs., No. 42, 3, 1970.
- N0628 = M 74. Descr. IAU Symp. 38, p.28, 1970.
Photo. Izv. Crimea Obs., 38, 219, 1967. A.J., 72, 129, 1967; 74, 515, 1969. A.&A., 29, 249, 1974. P.A.S.P., 86, 845, 1974.
Ptm. Izv. Crimea Obs., 38, 219, 1967; 44, 40, 1972. IAU Symp. 38, p.83, 1970. IAU Symp. 44, 62, 1972.
Sptm. Sov. A.J., 16, 628, 1973.
 HI 21 cm. Ap.J., 150, 8, 1967.
 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. A.J., 72, 129, 1967.
 Ap.J., 155, 417, 1969; 194, 559, 1974.
 Dist. modulus, Ap.J., 194, 559, 1974.
Interfer. Hα, A.&A., 12, 379, 1971.
Radio. Aust.J.Phys., 16, 360, 1963. A.&A., 29, 249, 1973.
- N0646 Western arm knotty. Eastern arm, smooth and diff. w. satellite attached.
Photo., Spec., A.&A., 34, 301, 1974. (V_0 of sat.: 7954 km s⁻¹).
- N0636 Ptm. B,Y: Pub. Byurakan, No. 42, 3, 1970.
- N0643B,C See Mem. Com. Obs. Mt. Stromlo, No. 13, 1956. N0643 is an outlying cluster in SMC.
 See P.A.S.P., 69, 252, 1957.
- N0660 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966.
- I1723 = MCG 1-5-28.
- A0141+16 One-arm spiral, compact core.
Photo. Ap.J., 160, 405, 1970.
- A0142+16 = Mk 361. Near III Zw 35.
Photo. and Spec. Mem. S.A.Ital., 40, 211, 1969 = K.P.N.O. Cont. No. 436.
- A0143-43 Magellanic Dwarf.
- N0668 m_p = 12 in MCG, vol. II, 1964. m_p = 13.5 in CGCG, vol. VI, 1968.
- N0669 m_p = 12 in MCG, vol. II, 1964. m_p = 12.9 in CGCG, vol. VI, 1968.
- I1727 = VV 338 = K 40a = Ho 46b. P(b?) w. N0672 at 9'.
 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 194, 559, 1974.
 Dist. modulus: Ap.J., 194, 559, 1974.
- N0672 = VV 338 = Ho 46a = K 40b. P(b?) w. I1727 at 9'.
Photo. Ap.J., 194, 559, 1974.
Rot. Vel. A.&A., 8, 364, 1970.
 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969; 194, 559, 1974.
 Dist. modulus: Ap.J., 194, 559, 1974.
 HI 21 cm. Ap.J., 150, 9, 1967.
- N0673 m_p = 12 in MCG, vol. III, 1963. m_p = 13.3 in CGCG, vol. V, 1965.

A0145-12 = Arp 4 = DDO 14. High surf. br. s spir. at 1'7 f.
HI 21 cm. A.J., 79, 767, 1974.

N0676 B* very close to vBN included in CGCG $m_p = 10.5$.

A0146-27 = Haro 16A, 10'n, 12' p Haro 16 (A0147-27).
Descr., Ptm., Spec. A.J., 75, 1143, 1970.

N0678 In group w. N0680, 691, 694, 695, 697, I0167.

N0681 Photo. Ap.J., 142, 154, 1965. Mem. S.A.Ital., 40, 133, 1969.
Ptm. Mem. S. A. Ital., 40, 133, 1969 = Cont. Asiago No. 214.
Rot., mass. Ap.J., 142, 154, 1965; 184, 735, 1973.

N0679 = V Zw 114. $m_p = 13.1$.

N0680 In group N0678 - 0697. I1730 at 3'7 nf.

A0147-27 = Haro 16 (Bol. Tonantzintla No.14, June 1956).
Descr., Photo. Ap.J.Let., 150, 133, 1967.
Dim., Ptm., Spec. A.J., 75, 1143, 1970.

I1731 At $\sim 30'$ of N 672, and $36'$ of I1727.

N0684 = I0165.

N0691 In group N 678 - 697.

N0694 = Mk 363 = V Zw 122. In group N 678-697. Class. and dim. in BGC refer to I0167, the large spir.
5' sf.

I0167 = Arp 31. N 694 5' np.

N0695, 0697 In group N 678 - 697. N 697 is the brightest.

N0701, I1738 Pair at 5'4. N 701 = Ho 47a. (Ho 47b at 3'3 is probably a *).

N0702 = Arp 75. P(b)? w. s comp. 1'5 f.

A0149+36 In Zwicky 1971. Dble system w. compact core.
SN1952a and Photo. P.A.S.P., 82, 736, 1970.

N0708 In Abell 262. Superimposed star.
Ptm. V, V-r: A.J., 75, 695, 1970.

I1746 QSO, PHL 1226 ($z = 0.404$) at 0'8.
Photo. Ap.J., 170, 233, 1971.
Ptm. Bull.A.A.S., 5, 397, 1973. IAU Symp. 58, 208, 1974.

A0151+36 = Mk 2. Photo. Astrofizika, 4, 587, 1968.

N0735 = MCG 6-5-58. V Zw 146, No.2. Nos. 1,3 red compacts at 1'4 np and nf.
SN1972e and Photo. P.A.S.P., 85, 427, 1973. IAU Cir. No.2448, 1972.

N0741 = III Zw 38 = VV175 = 4C 05.10 = PKS 0153+05. Brightest E in a group. N0742 at 0'8 in common halo.
Descr., dim. P.A.S.P., 80, 129, 1968. Ap.J., 173, 485, 1972.
Photo. Ap.J., 160, 405, 1970.
Ptm. Ap.J., 139, 284, 1964. B,V,R: A.J., 75, 695, 1970. Ap.J., 178, 1, 1972; 183, 731, 1973.
Pol. Ap.J.Let., 179, 193, 1973.
Dyn., mass, Ap.J., 139, 284, 1964.
Radio. Ap.J., 157, 481, 1969; 189, 399, 1974. Sov.A.J., 13, 881, 1970. Ap.Let., 6, 49, 1970.
A.J., 75, 523, 1970. M.N., 167, 251, 1974.

N0736 = VI Zw 111. In group N 733-740. Comp. core w. extended halo or psêudo outer ring.

N0742 = VV 178. Next to III Zw 38. In a group. N0741 at 0'8 in common halo.
Photo. Ap.J., 160, 405, 1970.
Radio. M.N., 167, 251, 1974.

N0748 $m_p = 12$ in MCG, vol.III, 1963.

N0740 In group N 733 - 740.

N0750, 0751 = Arp 166 = VV 189 = VI Zw 123 = K 46. P(c) at 0'4. Small spiral 2'5 np at end of long
asym. spur.
Ptm. and Dyn., mass, Ap.J., 139, 284, 1964.

N0753 N 759 at 23'5.
SN1954e and Photo. P.A.S.P., 82, 736, 1970.

N0761 N0760 at 1'6 is a dble *.

A0155+02 = Mk 582 = Arp 126 = VV 122 = K 47b. Close pair P(b)? Mk 582 is the Magellanic Irregular 28" nf
a compact tightly coiled spiral.

N0770 = Arp 78. P(b?) w. N 772 at 3'3 s.
Photo. Ap.J., 139, 1056, 1964. Ap.Let., 5, 257, 1970. IAU Symp. 44, p.386, 1972.
Spec. of 2 F comp. at $V = 20,174, 19,680 \text{ km s}^{-1}$: Ap.Let., 5, 257, 1970.

- N0772 = Arp 78. P(b?) w. N 770 at 3'3.
Photo. Ap.J., 139, 1056, 1964. Ap.Let., 5, 257, 1970. IAU Symp. 44, p.386, 1972.
Ptm. and Spec. Ap.Let., 5, 257, 1970.
HI 21 cm. M.N., 150, 337, 1970.
- N0777 P(a) w. N 778 at 7'0.
- N0783 = I1765. $m_p = 12.8$ in CGCG, vol. VI, 1968.
- N0788 P(a) w. I0184 at 18'5 p. Interacting chain of 3 spirals (Ho 53a,b) at 24' sp.
- N0812 $m_p = 12.8$ in CGCG, vol. VI, 1968.
- N0829 P.w. N 830 at 4'5. N 842 at 13'2 from N 830.
- A0206+35 = V Zw 191, No. 1 = 4C 35.03. F compact at 0'7 s.
Radio. M.N., 169, 477, 1974.
- N0833, 0835, 0838, 0839, 0848 = Arp 318. Group or chain. N 833, 835 interacting pair at 1'.
(N 848 is outside Arp Atlas field).
Spec. Mean vel. of group: $V_0 = 3885$ in "Nuclei of Galaxies", p.351, 1971.
- N0828 = VI Zw 177 = B2 0207+28. Distorted Sa.
- N0842 N 830 at 13'2.
- N0841 = V Zw 194. $m_p = 12.8$ in CGCG, vol. VI, 1968. Pec.
- N0851, I0211 = K 59. Pair at 5'. N0851 = Mk 588.
- A0208+13 = Mk 366 = III Zw 42. Compact core w. pseudo outer ring.
- A0211+03 = Mk 589 = III Zw 43. Descr., class. A.J., 76, 1000, 1971.
Photo. Mem. S.A.Ital., 40, 559, 1969 = K.P.N.O. Cont. No. 510.
Spec. Vel. by Sargent in Ap.J., 160, 405, 1970 (Source K3) rejected. Adopted V from Barbon (Mem.S.A.
Ital., 43, 313, 1972) and Ulrich (A.&A., 40, 337, 1975).
- N0863 = Mk 590. Seyfert.
Spec. Astrofizika, 10, 485, 1974.
- I1784 = K 61a.
- N0871 P(a) at 1'6 w. N 870, a compact E0 (D = 0'1).
Rot. vel. A.&A., 8, 364, 1970.
- N0876, 0877. Close pair at 2'1. In group w. N 870, 871.
- N0881 $m_p = 12.5$ in MCG, vol. III, 1963.
- A0218+39A,B = Arp 273 = VV 323 = V Zw 223 = K 64. Interacting pair at 1'4.
- N0890 P(a) w. sF spiral at 14'5.
- N0895 N 894 is part of it.
- N0891 In N1023 group.
Dim., and Isodens. A.J., 79, 671, 1974.
Spec. old HMS vel. (+246, source B) rejected. See 21 cm. refer.
HI 21 cm. A.&A., 28, 96, 1973; 33, 451, 1974.
Radio. M.N., 161, 127, 1973. A.&A., 31, 447, 1974.
- N0899, I0223, N0907 Interacting (?) triplet, 33' n of N 908.
Descr. and Spec. Ap.J., 185, 797, 1973.
- A0220+41A,B = Arp 145 = V Zw 229. Ring Gal. Dim. and Ptm. U,B,V: Ap.J., 194, 569, 1974.
Photo. Ap.J., 148, 321, 1967.
- A0220+42 = 3C 66B. 3C 66A (6'5 np) is a QSO (see Ap.J.Let., 190, 197, 1974). V Zw 230 at 25" sf.
Descr. and class. Ap.J., 140, 35, 1964. P.A.S.P., 80, 129, 1968.
Ptm. U,B,V,R: Ap.J., 178, 1, 1972; 183, 731, 1973.
Spec. vel. of 3 close comp. in cluster: P.A.S.P., 80, 129, 1968.
Radio. Nature, 211, 124, 1966. Ap.J., 144, 568, 1966; 147, 423, 1967. M.N., 165, 369, 1973.
A.&A., 28, 359, 1973.
- N0898 = UGC 1842 = MCG 7-6-4. Note correction to NGC R.A.
- N0908 Photo. Astrofizika, 4, 59, 1968. J.R.A.S.Canada, 68, 117, 1974.
Radio. Aust.J.Phys., 21, 193, 1968.
- A0221+35 = DDO 19. HI 21 cm. A.&A., 34, 43, 1974.
- N0910 In Abell 347.
Ptm. V,V-r: A.J., 75, 695, 1970.
- N0922 P(b?) w. anon. SB(s)b: at 13'.
- A0224-24 $m_p = 12$ in MCG, vol. IV, 1968.

N0925 In N1023 group. Note corrected Dec.
 Descr. P.A.S.P., 79, 152, 1967.
 Photo. Ap.J., 140, 85, 1964. Izv. Crimea Obs., 45, 162, 1972.
 Ptm. 7 col.: Izv. Crimea Obs., 45, 162, 1972. IAU Symp. 44, 162, 1972.
 Dyn., rot., mass, Ap.J., 140, 85, 1964. A.&A., 8, 364, 1970.
 HII reg. "Atlas and Catalogue", Univ. of Washington, Seattle, 1966. Ap.J., 155, 417, 1969;
 194, 559, 1974.
 Dist. Modulus: Ap.J., 194, 559, 1974.
 HI 21 cm. Ap.J., 142, 1366, 1965; 150, 8, 1967.
 A0224+22 = V Zw 242. Pec. with jet. Photo., Ap.J., 160, 405, 1970.
 N0936, 0941 P(a) at 12'6. Anon. Sp at 13'6 from N 941.
 N0945, 0948 = Ho 58a,b. Pair at 2'7.
 N0947 m_p = 12 in MCG, vol.IV, 1968.
 A0226+31 SN1965k. Ast. Tsirk. No.349, 1965. IAU Cir. No.1931, 1965. Inf.Bull.V.S., Nos.110, 113, 1965.
 N0942, 0943 = Arp 309 = VV 217 = Ho 59a,b. P(c) at 0'6. N 943 has a distorted absorpt. ring.
 N0949 Vel., rot., mass, Ast. Tsirk. No.797, 1974.
 A0228+39 SN1973p and Photo. P.A.S.P., 86, 516, 1974.
 N0959 m_p = 12.5 in CGCG, vol.VI, 1968.
 Radio. A.&A., 31, 447, 1974.
 I0235 = Mk 368 = UGC 2016.
 N0972 Descr., class. A.J., 79, 1242, 1974.
 Photo. Ap.J., 142, 649, 1965. IAU Symp. 29, 434, 1968. Mem.S.A.Ital., 40, 133, 1969 = Cont.Asiago
 No.214.
 Ptm. Mem.S.A.Ital., 40, 133, 1969 = Cont.Asiago No.214.
 Sptm. D.Wells, Univ. of Texas Dissert., Austin 1972, unpub.
 Rot., mass, Ap.J., 142, 649, 1965. C.R. Acad. Sc. Paris, 260, 6285, 1965 = Pub.O.H.P., 8, No.1.
 HI 21 cm. M.N., 150, 337, 1970.
 Radio. A.J., 78, 18, 1973.
 A0231+29 = DDO 26. HI 21 cm. A.&A., 34, 43, 1974.
 N0986 Ptm. I.R., 1-2.2 μ , M.N., 164, 155, 1973.
 Radio. Aust.J.Phys., 19, 883, 1966.
 N0985 = VV 285. Ring Gal. w. class 1, Seyfert nucl. Class., Spec., Ap.J.Let., 197, L1, 1975.
 A0232+37 = VV 96 = K 72a. SN1961p IAU Cir. No.1772, 1961. Mem.S.A.Ital., 33, 1, 1962.
 w. Photo. A.J., 69, 236, 1964.
 A0232+59 = Maffei 1. Possible member Local Group.
 Discovery, Descr., P.A.S.P., 80, 618, 1968; 83, 822, 1971. Observ., 90, 154, 1970.
 Ap.J.Let., 163, L25, 1971; 165, L1, 1971.
 Photo. P.A.S.P., 80, 618, 1968; 83, 822, 1971. Ap.J.Let., 161, L13, 1970; 163, L25, 1971;
 165, L1, 1971.
 Ptm. M.N., 162, 25P, 1973. 2.2 μ : Ap.J.Let., 163, L25, 1971. 10 μ : Ap.J.Let., 176, L95, 1972.
 Spec., vel.disp. Ap.J.Let., 163, L25, 1971.
 Sptm. Ap.J.Let., 163, L25, 1971.
 Modulus, mass. Nature, 231, 35, 1971. Ap.J.Let., 163, L25, 1971.
 HI 21 cm. no detection: Ap.J.Let., 163, L25, 1971.
 Radio. no detection: Ap.J.Let., 161, L13, 1970. Nature, 230, 105, 1971.
 Poss. SN remnant? Nature, Phys. Sc., 232, 58, 1971.
 N0991 In N1052 group. Anon. obj. 34' sp.
 I0239 In N1023 group.
 A0234+34 SN1938a. P.A.S.P., 51, 36, 1969.
 A0234+20 = Mk 369 = II Zw 4 = III Zw 50.
 Photo., Descr., Spec. Mem.S.A.Ital., 40, 211, 1969 = K.P.N.O. Cont. No.436.
 N1016 m_p = 12 in MCG, vol.III, 1963. m_p = 13.3 in CGCG, vol.V, 1965.
 N1022 In N1052 group.
 HII reg. no detection: Bull.A.A.S., 6, 343, 1974.
 N1003 In N1023 group. Cluster of spirals in background.
 SN1937d. Ann. Rev. Ast. Ap., vol.2, p.248, 1964.
 A0236+18A,B = Arp 258 = VV 143. Close interacting pair. F spiral 1'l sp + "fragments". Photo. Ap.J., 130, 23, 1959.
 N1024 = Arp 333. Very thin outer arms form pseudo ring.
 N1032 m_p = 12 in MCG, vol.III, 1963. m_p = 13.2 in CGCG, vol.V, 1965.
 I1830 = Haro 18 (Bol. Tonantzintla No.14, June 1956). I1826 7' p.
 Descr., dim., Spec. A.J., 75, 1143, 1970.

- N1035 In N1052 group.
- N1023 = Arp 135. Brightest of N1023 group. F Ell. sat. at East end of major axis.
 Ptm. 5 col.: A.J., 73, 313, 1968. U,B,V: Trudy Ast. Obs. Leningrad, 28, 32, 1971.
 HI 21 cm. A.J., 79, 767, 1974.
- N1036 = Mk 370. Spec., Sptm., HI 21 cm. A.&A., 41, 61, 1975.
- A0237-34 Fornax System. E dwarf in Local Group.
 Photo. Ap.J., 151, 105, 1968; 159, 425, 1970. Ann.Rev.Ast. & Ap., 9, 35, 1971.
 Ptm. Ap.J., 151, 105, 1968; 188, 19, 1974. J.R.A.S.Canada, 66, 217, 1972.
 Glob. clusters: Ap.J., 141, 308, 1965; 159, 425, 1970; 181, 641, 1973.
 P.A.S.P., 81, 875, 1969. Ap.Let., 3, 175, 1969.
 Dyn., mass. Ap.J., 144, 869, 1966. A.J., 74, 587, 1969. Ann. Rev. Ast. & Ap., 9, 35, 1971.
 Spec., vel. Glob. Clusters: Ap.J.Suppl., 19, No.171, 1969.
 Star counts. Ap.J., 151, 105, 1968; 188, 19, 1974.
- N1042, 1047 In N1052 group.
- N1048A,B In N1052 group. Close pair at 0'9.
- A0238+59 = Maffei 2. Possible member Local Group or UMa-Cam cloud.
 Discovery, Descr., class. P.A.S.P., 80, 618, 1968. Ap.J., 180, 351, 1973.
 Photo. Ap.J.Let., 161, L13, 1970. Ap.J., 180, 351, 1973. A.&A., 19, 317, 1972.
 Ptm. P.A.S.P., 82, 663, 1971. M.N., 162, 25P, 1973. 1.65 to 3.5 μ : Ap.J., 180, 351, 1973.
 Spec., Sptm. Ap.J., 180, 351, 1973.
 HII reg., modulus: Ap.J., 180, 351, 1973. Nature, 231, 35, 1971.
 HI 21 cm. A.&A., 12, 264, 1971. Ap.J.Let., 169, L71, 1971. Ap.Let., 13, 1, 1973.
 Radio. Ap.J.Let., 161, L13, 1970; 169, L71, 1971. Ap.J., 173, 257, 1972. A.&A., 12, 264, 1971;
 19, 317, 1972. Nature, 231, 35, 36, 1971; 235, 53, 1972.
- N1044, 1046 Pair at 2'0. N1044, a radio gal. is itself double; + F comp. 0'96 np.
- N1052 Brightest in N1052 group. "Active" radio gal.
 Descr., Prec. position. Ap.J.Let., 151, L75, 1968.
 Ptm. 10 μ : Ap.J.Let., 159, L165, 1970; 176, L95, 1972.
 Sptm. C.R. Acad. Sc. Paris, B, 268, 1214, 1969. A.&A., 19, 405, 1972. IAU Symp. 44, 54, 1972.
 Pol. Ap.J.Let., 179, L93, 1973.
 Radio. Ap.Let., 2, 187, 1968; 6, 49, 1970. Ap.J.Let., 151, L35, 1968. Ap.J., 157, 481, 1969;
 170, 207, 1971; 189, 399, 1974. A.J., 75, 523, 1970; 79, 1232, 1974. Sov.A.J., 13, 881, 1970.
 IAU Symp. 44, 222, 1972.
- N1055 In N1068 group.
 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966.
- N1068 = M 77 = 3C 71 = Arp 37. Brightest in group. Typical class 2 Seyfert. $B_N = 12.78$, $B_T(\text{excl.N}) = 9.70$
 Diam. nucl.: A.J., 73, 175, 858, 1968.
 Photo. A.J., 73, 842, 861, 1968. Ap.J., 151, 71, 1968. IAU Symp. 29, p.21, 1968. "Nuclei of
 Galaxies", p.27, 1971. Ap.Let., 11, 21, 1972. J.R.A.S.Canada, 68, 117, 1974.
 Publ. Dept. A. Univ. Texas, II, 2, No.7, 1968.
 Ptm. V isoph.: A.J., 73, 846, 1968. Nucl. and total mag.: A.J., 73, 858, 1968. Publ. Dept. A. Univ.
 Texas, II, 2, No.7, 1968. "Att...Conv. Sci. Osserv. Cima Ekar, Padova-Asiago", p.101, 1973 =
 Cont. Asiago, No.300bis.
 B(pg): M.N., 152, 79, 1971.
 U,B,V: Ap.J., 147, 394, 1967; 151, 71, 1968. Ap.J.Let., 150, L177, 1967. Ap.Let., 1, 171, 1968;
 11, 21, 1972. A.J., 73, 866, 1968; 74, 335, 1969. Sov.A.J., 16, 763, 1973; 17, 1169,
 1973. M.N., 169, 357, 1974. Soob. Spets. Ast. Obs. No.9, 3, 1973.
 Near and far I.R. (1-300 μ): A.J., 72, 314, 1967; 73, 868, 870, 1968. Sov.A.J., 12, 184, 1968.
 Ap.J., 147, 394, 1967; 187, 213, 1974; 190, 353, 1974. Ap.J.Let., 199, L165, L173, 1970;
 161, L207, 1970; 162, L79, 1970; 166, L45, 1971; 176, L95, 1972; 177, L21, L115, 1972;
 182, L89, 1973; 186, L69, 1973; 187, L109, 1974. M.N., 169, 357, 1974. Bull.A.A.S., 1,
 248, 1969; 5, 40, 1973; 6, 448, 1974. Ast. Tsirk. No.557, 1970. Nature, 233, 256, 1971.
 IAU Symp. 44, 164, 1972. Soob. Septs. Ast. Obs. No.9, 3, 1973.
 Redd. in nucl.: Ap.J.Let., 154, L53, 1968.
 Core size at 10 μ : Ap.J.Let., 186, L69, 1973.
 Spec. Mem.S.A.Ital., 37, 713, 1966 = Pub. Padova No.134.
 Photo. Ap.Let., 11, 21, 1972. Ap.J., 192, 581, 1974.
 Ha line var.: Bull.A.A.S., 4, 231, 1972. Ap.J., 182, 363, 1973. J.R.A.S.Canada, 66, 71, 1972.
 Ast. Tsirk. No.688, 1972; No.831, 1974.
 Internal mot.: Ap.J., 151, 71, 1968. IAU Symp. 29, 21, 1968.
 Sptm. Ap.J., 141, 892, 1965; 162, 743, 1970; 164, 1, 1971; 178, 617, 1972. Ap.J.Let., 152, L165,
 1968; 154, L53, 1968. A.J., 73, 853, 1968. Ann.Ap., 31, 569, 1968. A.&A., 1, 305, 1969;
 33, 331, 337, 1974. Astrofizika, 1, 78, 1965. Ast. Tsirk. No.467, 1968. Sov.A.J., 11, 767,
 1968. IAU Symp. 29, 82, 1968. "Nuclei of Galaxies", p.151, 1971. Pub.A.S.Japan, 24, 145, 1972.
 Ap.Let., 13, 165, 1973. M.N., 168, 109, 1974. Bull.A.A.S., 6, 342, 1974.
 Pol. A.J., 70, 138, 1965; 73, 852, 1968. Ast. Tsirk. No.454, 1967. Ap.J., 151, 71, 1968.
 Ap.J.Let., 152, L165, 1968; 170, L53, 1971; 172, L23, 1972; 173, L113, 1972; 174, L127, 1972;
 192, L19, 1974. Astrofizika, 4, 409, 1968; 7, 417, 1971; 8, 529, 1972. Nature, 225, 621, 1970.
 Acta Ast., 21, 311, 1971. Bull.A.A.S., 4, 223, 1972; 6, 312, 1974. Ap.Let., 12, 69, 1972.
 Rot., mass. C.R.Acad. Sc. Paris, 256, 601, 1963 = Pub. O.H.P., 6, No.23. J.Observateurs, 48, 247,
 1965 = Pub. O.H.P., 8, No.16. Ann.Ap., 28, 574, 1965.
 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 194, 559, 1974.
 HI 21 cm. A.&A., 10, 198, 1971. IAU Symp. 44, 267, 1972.
 Radio. Ann.Ap., 26, 343, 1963. Ap.J., 142, 106, 1965; 144, 216, 1966; 148, 367, 1967; 189, 399,
 1974; 191, 305, 1974. Ap.J.Let., 151, L27, 1968. Ap.Let., 8, 153, 1971. A.J., 76, 537, 1971;
 79, 903, 1974. A.&A., 25, 303, 1973; 33, 351, 1974. Ast. Tsirk. No.536, 1969.
 Sov.A.J., 13, 881, 1970.
 X-rays. no detection: Ap.J.Let., 165, L43, 1971.

- N1058 In N1023 group.
 Descr. IAU Symp. 38, 30, 1970.
 Photo. Ap.J., 139, 514, 1964. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.396, 1965.
 F.A.S.P., 82, 894, 1970. Mem.S.A.Ital., 42, 163, 1971 = Cont. Asiago No.255. "Supernovae and
 SN Remnants", Ap. Space Sc. Lib., vol.45, p.215, 1974.
 Spec. Old HMS vel. (V = 221, Source C) rejected.
 HII reg., Dist. modulus: Ap.J., 194, 559, 1974.
 SN1961v. Ap.J., 139, 514, 1964. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.136,
 1965. Ann. Ap., 27, 319, 1964. Coll. Int. Novae & SN, CNRS, Paris, p.194, 1965. Inf. Bull.
 V.S., No.196, 1967. P.A.S.P., 83, 894, 1970. Ap.J., 167, 89, 1971; 182, 225, 1973.
 "Supernovae and SN Remnants", Ap. Space Sc. Lib., vol.45, pp.143, 215, 1974.
 SN1969l. IAU Cir. Nos.2194, 2195, 2196, 1969. Ast. Tsirk. No.522, 1969; No.590, 1970. Mem.S.A.Ital.
 42, 163, 1971. A.&A., 29, 123, 1973. Ap.J., 185, 303, 1973; 193, 27, 1974. "Supernovae & SN
 Remnants", Ap.Space Sc. Lib., vol.45, p.215, 1974.
 Dist. modulus: Ap.J., 193, 27, 1974.
- N1073 In N 1068 group.
 Photo. Coll. Int. CNRS, Paris, p.194, 1965. IAU Symp. 38, p.23, 1970. Ap.J., 194, 559, 1974.
 Ptm. 7 col.: Izv. Crimea Obs., 45, 162, 1972. IAU Symp. 44, 62, 1972.
 Spec. Old HMS vel. (Source C) rejected. See A.J., 76, 22, 1971.
 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969;
 194, 559, 1974.
 Dist. modulus: Ap.J., 194, 559, 1974.
 SN1962z. C.R.Acad. Sc. Paris, 256, 5284, 1963 = Pub. O.H.P., 6, No.41. Ann.Ap., 27, 327, 1964 =
 Pub. O.H.P., 7, No.24. Ann. Ap., 27, 319, 1964 = Cont. Asiago No.159. Coll. Int. Novae & SN
 CNRS, Paris, pp.194, 202, 1965. Abh. Univ. Kasan, 125, No.7, 1965. Bull. Kasan Obs. No.38,
 1965. Tokyo Ast. Bull. No.176, 1967.
 Radio. Aust.J.Phys., 19, 883, 1966.
- A0243+15 = Mk 597 Close pair.
- N1084 Photo. Ann. Ap., 27, 300, 1964. Coll. Int. Novae & SN, CNRS, Paris, p.179, 1965.
 Cont. Asiago No.174, 1965. Mem.S.A.Ital., 40, 133, 1969 = Cont. Asiago No.214.
 Astrofizika, 6, 367, 1970.
 Ptm. Mem.S.A.Ital., 40, 133, 1969 = Cont. Asiago No.214. Astrofizika, 6, 367, 1970.
 Sptm. Ap.J., 163, 249, 1971. A.&A., 33, 331, 337, 1974.
 Dyn., rot. Ap.J., 184, 735, 1973.
 SN1963p. Asiago Cont. No.174, 1965. Tokyo Ast. Bull. No.176, 1967.
 Radio. Aust.J.Phys., 21, 193, 1968.
- N1087 In N1068 group. P.w. N1090 at 15' and N1094 at 20'.
 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
- N1090 In N1068 group. P.w. N1087 at 15'.
 SN1962k. A.N., 290, 135, 1967.
 SN1971e. IAU Cir. No.2376, 1971. Ast. Tsirk. No.666, 1971. Yamamoto Cir. No.1745, 1971.
 P.A.S.P., 84, 844, 1972 (w.Photo).
- N1097A Small E comp. 3'5 n of N1097. (see Arp 77).
 Mag. and colors reduced w. dim. on PSS (1'1: x 0'6)
- N1097 = Arp 77 w. comp. N1097A. Pec. N.w. inner spiral struct.
 Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967. Bull.A.A.S., 4, 237, 1972.
 J.R.A.S.Canada, 68, 117, 1974.
 Photo. P.A.S.P., 77, 287, 1965. Ap.J., 192, 279, 1974. J.R.A.S.Canada, 68, 117, 1974.
 Ptm. Atl.Gal.Aust., 1968. J.H.K.L: M.N., 164, 155, 1973. U,B,V: Ap.J., 192, 279, 1974.
 Sptm. A.&A., 33, 331, 337, 1974. Ap.J., 192, 279, 1974.
 Rot. vel. A.&A., 8, 364, 1970.
 HI 21 cm. Source R2 (A.&A., 3, 292, 1969), quality D, rejected.
 Radio. Aust.J.Phys., 16, 360, 1963; 19, 565, 883, 1966. Proc.Ast.S.Aust., 2, 159, 1972.
- A0244+37 = K 77a Photo. Ann.Ap., 27, 300, 1964. Coll.Int. Novae & SN, CNRS, Paris, p.178, 1965.
 SN1963l and Photo. P.A.S.P., 76, 325, 1964.
- N1094 In N1068 group. P.w. N1087 at 20' and Anon S at 1'1.
- N1104 In N1068 group.
- A0246-00 = I Zw 9. F compact ($m_p = 18.0$) in background of group.
- A0246+18 e compact in CGCG, vol.V, 1965; $m_p = 13.1$ includes * superposed on N.
- I1854 = Mk 372. Class 2, Seyfert N.
 Spec., Photo. Ap.J., 192, 581, 1974.
- N0247-00 SN1959f and Photo. P.A.S.P., 73, 175, 1961.
- N1136 P. w. s. Anon. at 3'0.
- N1140 P(b?) w. outlying knots at end of "tail".
 Sptm. D. Wells, Univ. Texas Dissert., Austin, 1972, unpub.
- N1143, 1144 = Arp 118 = VV 331 = K 83. P(b) at 0'7. "Ring" gal.
 Descr., dim. Ptm. Ap.J., 194, 569, 1974.

A0255+05 = 3C 75 = III Zw 52 Nos.1,2 = K 84. P(b) at 0'3. In Abell 400.
A: $B_T(A) = 15.40 \pm 0.08$, $(B-V)_T(A) = 1.23 \pm 0.03$ reduced w. dim. on PSS (0'4: x 0'4:)
B: $B_T(B) = 15.7 \pm 0.1$, $(B-V)_T(B) = 1.21 \pm 0.03$ reduced w. dim. on PSS (0'4: x 0'4:)
Class. Ap.J., 140, 35, 1964.
Ptm. B,V,R: A.J., 75, 695, 1970. Ap.J., 178, 25, 1972; 183, 731, 1973.
Spec. Vel. is mean for both components. $\Delta V = 359$, Ap.J., 191, 55, 1974.
Radio. Ap.J., 142, 106, 1965.

A0255-54 Descr., posit. A.J., 76, 775, 1971.

A0255+41 = V Zw 97. E w. extended halo.
Descr., class. A.J., 76, 1000, 1971.
Photo. Ap.J., 160, 405, 1970.

N1156 Ptm. Atti XII Rui. S.A. Ital. p.40, 1969.

N1160, 1161 = K 86. Pair at 3'5. $m_p = 13.0$, 12.6 in CGCG, vol.III, 1966.

N1167 = 4C 34.09.
Spec. vel. in Ap.J.Let., 148, L53, 1967 (Source U7), rejected. See Ap.J.Let., 182, L13, 1973.

N1169 * close to vsBN.

N1187 P(a) w. s. anon. SAB(r)0/a? at 21'.

A0300+16 = 3C 76.1 Mag. and colors reduced w. dim. on PSS (0'40: x 0'35).
Ptm. U,B,V,R: Ap.J., 178, 25, 1972; 183, 731, 1973.
Radio. Ap.J., 144, 216, 1966; 148, 367, 1967; 151, 33, 1968. A.J., 73, 1, 1968.
A.&A., 34, 341, 1974.

N1175 P. w. N1177 (= I 281) at 2'5.

N1199 Brightest in N1199 group.

I1876 = Haro 19 (Bol. Tonantzintla, No.14, June 1956). Double system.
Descr., dim. Ptm. A.J., 75, 1143, 1970.
Spec. ΔV of 2nd comp. = -169; A.J., 75, 1143, 1970.
HI 21 cm. A.&A., 29, 217, 1973.

I0284 V Zw 319 at 0'7 sp, a F compact, $m_p = 17.5$.

N1209 In N1199 group.

N1218 = 3C 78. Descr., class. Ap.J., 140, 35, 1964. P.A.S.P., 80, 129, 1968.
Ptm. V,B,R: Ap.J., 178, 25, 1972; 183, 731, 1973.

N1229 In chain of gal. = Arp 332 = VV 337b. The four brightest obj. in chain are from N to S: N1228, 1229, 1230 and I1892. N1228, 1229 = VV 337a,b.
I1892 = VV 260. N1230 = MCG-4-8-27.

I0292 = I1887. In Perseus Cl.

N1232 = Arp 41. P(a) w. N1232A at 4'0.
Descr. IAU Symp. 29, 421, 1968. IAU Symp. 38, 30, 1970.
Photo. IAU Symp. 29, 421, 1968.
HI reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 168, 327, 1971;
194, 559, 1974.
Dist. modulus: Ap.J., 194, 559, 1974.
Radio. Aust. J. Phys., 16, 360, 1963.

N1232A Dwarf SB(s)m satellite at 4'0 f N1232.

N1224 In Per Cl.

I0298A,B = Arp 147 = I Zw 11. Ring gal.
Descr., dim. Mem. S. A. Ital., 37, 419, 1966 = Padova Comm. No.45. Ap.J., 194, 569, 1974.
Photo. Mem. S. A. Ital., 37, 419, 1966 = Padova Comm. No.45.

N1241, 1242 = Arp 304 = VV 334 = Ho 68 a and c. Pair at 1'5. N1243 (= Ho 68b) at 3'1 is a dble. *.
Radio. M.N., 167, 251, 1974.

N1233 = 4C 39.11; identif. may be uncertain.

N1248 P(a) w. anon. SBp at 2'6.

N1255 Note corr. to NGC Dec.

N1253, N1253A = Arp 279. Pair at 3'7. DDO 31 is the dwarf companion.
HI 21 cm. A.J., 79, 767, 1974. DDO dwarf confused by N1253.

N1250 In Per Cl.

I0309 In Per Cl.

I0310 In Per Cl. Descr. and Photo. P.A.S.P., 80, 129, 1968.
Ptm. Isodens.: A.J., 79, 671, 1974.
Radio. M.N., 138, i, 1968. Nature, 237, 269, 1972. A.&A., 26, 413, 1973.

A0313+31 = K 88a.

N1260, I0312 In Per Cl.

N1260 = MCG 7-7-47 (N1259 = MCG 7-7-46).

N1265 = 3C 83.1 In Per Cl. Radio gal. w. tail.
Descr., class. Ap.J., 140, 35, 1964. P.A.S.P., 80, 129, 1968.
Photo. Ap.J., 168, 321, 1971. Ap.Let., 14, 7, 1973.
Ptm. Ap.Let., 14, 7, 1973. V.B.R: Ap.J., 183, 731, 1973.
Dyn. Bull.A.A.S., 3, 238, 1971. Ap.J., 168, 321, 1971.
 For vel. of many anon. obj. and dyn. of cluster see also A.J., 77, 4, 1972.
Radio. Nature, 205, 488, 1965; 237, 269, 1972; 244, 502, 1973. M.N., 138, 1, 1968; 161, 167, 1973.
 Sov. A.J., 13, 881, 1970. A.&A., 26, 413, 1973. IAU Symp. 58, p.113, 1974.

N1267, 1268 In Per Cl.

N1291 Photo. IAU Symp. 58, 339, 1974. J.R.A.S.Canada, 68, 117, 1974. Ap.J.Suppl., 29, No.284, 1975.
Ptm. Atl. Gal. Austr., 1968. Ap.J.Suppl., 29, No.284, 1975.
IR: 1-3.5u: M.N., 164, 155, 1973.
HI 21 cm. Observ., 90, 264, 1970.
Radio. Aust.J.Phys., 16, 360, 1963.

N1270, 1271, 1272, 1273, 1274 In Per Cl.

N1274 I1907 (E4:) 2'3f.

N1275 = 3C 84. Brightest in Per Cl. (Abell 426). Class 2 Seyfert.
Descr., class, dim. Ap.J., 140, 35, 1964. P.A.S.P., 80, 129, 1968. Ap.J.Let., 159, L151, 1970.
 Ap.J., 173, 485, 1972.
Photo. Ap.J., 142, 1351, 1965; 159, L151, 1970; 163, 195, 1971; 168, 321, 1971. A.J., 73, 920, 921, 1968; 79, 671, 1974. "Nuclei of Galaxies", pp.27, 271, 1971.
Ptm. U.B.V: Ap.Let., 1, 171, 1968; 3, 103, 1969. Ap.J.Let., 158, L19, 1969; Ap.J., 173, 485, 1972; 178, 1, 25, 1972; 183, 731, 1973. A.J., 73, 866, 1968; 75, 695, 1970. M.N., 152, 79, 1971; 169, 357, 1974. Sov.A.J., 16, 763, 1973; 17, 169, 1973.
Near and Far IR (1.6 - 21u): Ap.J.Let., 159, L165, 1970; 176, L95, 1972. A.J., 73, 866, 868, 1968. Sov.A.J., 12, 184, 1968. Ast. Tsirk. No.607, 1971. M.N., 169, 357, 1974.
Isodens. Ap.J., 163, 195, 1970 (20' field, includ. 10 obj.). A.J., 79, 671, 1974 (40' x 50' field, includ. many objects).
Spec. Ap.J., 142, 1311, 1965; 168, 321, 1971. Mitt. Ap. Obs. Crimea, 35, 87, 1966. Sov.A.J., 13, 569, 1970.
Photo. A.J., 73, 842, 1968. Ap.J., 192, 581, 1974.
Vel. of many obj. in cl.: A.J., 77, 4, 1972.
Sptm. Ap.J.Let., 154, L53, 1968. Ap.J., 162, 743, 1970; 164, 1, 1971. A.J., 73, 849, 1968.
 Ast. Tsirk. No.467, 1968. IAU Symp. 29, 83, 1968. Sov.A.J., 11, 767, 1968; 18, 271, 1974; 18, 717, 1975. "Nuclei of Galaxies", p.151, 1971. IAU Symp. 58, 341, 1974.
Pol. Ap.J., 151, 71, 1968; Ap.J.Let., 174, L27, 1972. Astrofizika, 4, 409, 1968; 7, 417, 1971; 8, 509, 1972. Ast. Tsirk. No.454, 1967; No.526, 1969.
Dyn. of Cl. Ap.J., 168, 321, 1971.
SN1968a. IAU Cir. No.2051, 1968. Ast. Tsirk. No.458, 1968.
HI 21 cm absorp. Ap.J., 185, 809, 1973.
Radio. Ann. Ap., 26, 85, 1963. Nature, 205, 488, 1965; 207, 62, 1965. Ap.J., 144, 568, 843, 1966; 146, 621, 634, 1966; 147, 423, 908, 1967; 151, 43, 768, 1968; 152, 43, 639, 1968; 153, 1001, 1968; 154, 423, 1968; 158, 849, 1969; 161, 1, 1970; 170, 207, 1971; 172, 299, 1972.
 Ap.J.Let., 151, L27, 1968; 154, L49, 1968; 156, L15, 1969; 173, L47, 1972. A.J., 71, 864, 927, 1966; 72, 230, 1967; 73, 293, 873, 874, 1968; 74, 824, 1969; 76, 537, 1971; 77, 810, 819, 1972; 78, 163, 536, 1973; 79, 1232, 1974. M.N., 138, 1, 1968. Ap.Let., 4, 139, 1969; 8, 153, 1971.
 Mem.R.A.S., 77, Part 3, 1973. A.&A., 25, 503, 1973. Sov.A.J., 9, 238, 418, 1965; 10, 225, 1966; 13, 21, 1969; 16, 795, 1973.
V.L.B.I: Ap.J., 153, 705, 1968; 169, 1, 1971; 177, 101, 1972; 193, 293, 1974. Ap.J.Let., 153, L209, 1968. Sov.A.J., 14, 627, 1971; 16, 576, 1973.
Outburst 3 mm. IAU Cir. No.2519, 1973.
X-rays. Ap.J., 178, 309, 1972; 183, 15, 1973; 188, 217, 1974. Ap.J.Let., 164, L81, 1971; 165, L43, 1971; 173, L99, 1972; 185, L13, 1973; 189, L59, 1974; 193, L53, L57, 1974. Bull.A.A.S., 3, 236, 399, 1971; 6, 313, 437, 1974.

N1277, 1278, 1281, 1282, 1283 In Per Cl.

N1282 Note corr. to NGC coord.

N1300 Descr., class. P.A.S.P., 81, 51, 1969.
Photo. Vistas in Ast., vol.14, 241, 1972. A.J., 78, 606, 1973. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Sov. A.J., 10, 34, 1966. A.J., 78, 606, 1973.
HII reg. "Atlas and Catalogue" Univ. of Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
Radio. A.&A., 29, 249, 1973.

N1313 N1313A at 16'5-sf (w. corr. coord.).
Descr. Vistas in Ast., vol.14, 210, 1972.
Photo. Z. f. Ap., 69, 242, 1968. Vistas in Ast. vol., 14, 224, 1972. Observ., 94, 7, 1974.
 J.R.A.S.Canada, 68, 177, 1974.
Ptm. Atl. Gal. Austr., 1968. Vistas in Ast., vol. 14, 231, 1972.
 2.2u(up. limit): M.N., 164, 155, 1973.
Spec. Mt.Stromlo vel. (Source H) rejected. Misident. V₀ of HII reg. N1313-I = 516 ± 85.
 Cordoba Interfer. vel. (Source P4) corr. to + 507. See Observ., 95, , 1975.
Interfer., Rot. mass. Observ., 94, 7, 1974.
HII reg. Z. f. Ap., 69, 242, 1968.
SN1962m Cordoba Obs. Rep. No.119, 1963. M.N., 131, 155, 1965; 158, 375, 1972.
Radio. Aust.J.Phys., 16, 360, 1963; 19, 883, 1966.

I0313 In Per Cl.
 N1298 QSO 4C-02.15 at 3'8. (Ap.J., 175, 601, 1972).
 N1302 P. w. anon. S sp. at 22'5.
 N1293, 1294 Pair of E and L at 2'. In Per Cl. Note corr. to NGC coord.
 N1310 In Fornax I Cl. SN1965j and Photo. P.A.S.P., 78, 471, 1966.
 N1313A Small Spir. at 16'5 sf N1313. Note corr. coord.
 N1316 = Arp 154 = Fornax A. In Fornax I Cl.? possibly foreground. N1317 at 6'3 nf.
Descr., class. Ap.J., 140, 35, 1964.
Photo. Ap.J., 139, 1378, 1964; 140, 44, 1964. "Periodic Orbits, Stability and Resonances", p.314, 1970. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Atl. Gal. Austr., 1968. U,B,V: A.J., 74, 335, 1969. Ap.J., 178, 1, 1972.
I.R. 1-3.5μ: M.N., 164, 155, 1973.
Rot. Nature, 207, 1282, 1965.
Radio. Ap.J., 140, 44, 1964. Ann.Ap., 28, 75, 1965; 31, 153, 1968. Proc. A.S.Aust., 1, 229, 1969.
 M.N., 152, 439, 1971.
 N1317 = N1318. Fornax I Cl. P(a) w. N1316 at 6'3.
Ptm. Atl. Gal. Austr., 1968.
 N1315, 1319 In N1315-1332 group. N1319 at 6'8 np N1325.
 N1326 Fornax I Cl.
 N1325 In N1315-1332 group. P(a) w. N1318 at 6'8, N1322 at 28'5.
 N1320 = Mk 607. P. w. N1321 (= Mk 608) at 1'7.
 N1325A = Ho VI (1958). P(a) w. N1325 at 13'6, N1332 at 20'6.
 A0322-06 = Mk 609. Poss. Seyfert. P. w. A0323-06 (Mk 610) at 1'6.
Spec. Astrofizika, 10, 485, 1974.
 N1316C In Fornax I Cl.
 A0323-06 = Mk 610. Poss. Seyfert. P. w. A0322-06 (Mk 609) at 1'6.
Spec. Astrofizika, 10, 485, 1974.
 N1316A, B Fornax I Cl. Pair in contact at 3'.
 N1332 In N1315-1332 group. P. w. N1331 at 2'8.
Photo. Ap.J., 140, 681, 1964.
Ptm. Ap.J., 140, 681, 1964. 10 col.: Ap.J., 179, 731, 1973.
Rot. vel. A. & A., 8, 364, 1970.
HI 21 cm. Source R2 (A.&A., 6, 456, 1970), quality D, rejected.
 N1331 = I0324. In N1315-1332 group. P. w. N1332 at 2'8.
Photo. and Ptm. (w. N1332), Ap.J., 140, 681, 1964.
 I1933 In a group w. I1920, -28, -42, -46, -54.
 A0325+02 = 3C 88 = 4C 02.10.
Descr., class. Ap.J., 140, 35, 1964.
Ptm. U,B,V,R: Ap.J., 178, 25, 1972; 183, 731, 1973.
Radio. Ap.J., 142, 106, 1965; 144, 216, 1966. A.J., 73, 1, 1968.
 A0325-17 = Haro 20 (Bol. Tonantzintla, No.14, June 1956).
Dim., Ptm., Spec. A.J., 75, 1143, 1970.
HI 21 cm. A.&A., 29, 217, 1973.
 N1341 In Fornax I Cl. * 1'2 ssf.
 A0326+39 B2 R.S. Double obj.
 N1344 = N1340.
 N1351A In Fornax I Cl.
 N1345 = Haro 21 (Col. Tonantzintla No.14, June 1956).
Dim., Ptm., Spec. A.J., 75, 1143, 1970.
HI 21 cm. A.&A., 29, 217, 1973.
 A0328-03 = Mk 612. Poss. Seyfert. Spec. Astrofizika, 10, 485, 1974.
 N1351 In Fornax I Cl.
 N1350 In Fornax I Cl.
III reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966.
SN1959a and Photo. P.A.S.P., 72, 208, 1960.
 I1954 In a group w. I1933.
 N1355 P(a) w. N1358 at 6'8.

N1357 Sptm. D. Wells, Univ. Texas Dissert., Austin, 1972, unpub.
HII reg. Bull. A.A.S., 6, 343, 1974.

A0331+39 = 4C 39.12. B2 R.S.

N1358 P(a) w. N1355 at 6'8.

I1953 Possibly in N1315-1332 group.

N1359 P(a) w. anon. SAB(r)O⁺ at 8'5.

N1365 In Fornax I Cl.? possibly foreground.
Descr., class. P.A.S.P., 77, 287, 1965; 70, 152, 1967; 81, 51, 1969.
Photo. P.A.S.P., 77, 287, 1965; 81, 51, 1969. Vistas in Ast., vol.14, p.219, 1972.
Ap.J., 192, 279, 1974.
Ptm. Atl. Gal. Aust., 1968. J,H,K,L: M.N., 164, 155, 1973.
U,B,V: Ap.J., 192, 279, 1974.
Sptm. Ap.J., 192, 279, 1974.
SN1957c. Carneg. Inst. Yearbk., 57, 1958.
HII 21 cm. Source R2 (A.&A., 3, 292, 1969), quality D, rejected.
Radio. Aust. J.Phys., 16, 366, 1963; 19, 883, 1966.

N1343 = VII Zw 8. Ring struct. in nucl. F bar.
Descr. and Photo. Observ., 93, 27, 1972. Not SA(r) type.
Ptm. U,B,V: Ast. Tsirk. No.783, 1973; No.814, 1974.
Spec. $z = 0.001$ (M.N., 153, 383, 1971) very uncertain; rej.

N1371 = N1367.

N1375, 1374 In Fornax I Cl. Pair at 2'4.

N1379 In Fornax I Cl. Photo. J.R.A.S.Canada, 68, 117, 1974.

N1380 In Fornax I Cl. * 0'85 sp N.

N1376 P(a) w. anon. S sp at 5'3.

N1381 In Fornax I Cl. Photo. J.R.A.S.Canada, 68, 117, 1974.

N1380A,B, 1386, 1389 In Fornax I Cl.

N1387 In Fornax I Cl. Photo. J.R.A.S.Canada, 68, 117, 1974.

N1385 Radio. Aust. J. Phys., 21, 193, 1968. A.&A., 31, 447, 1974.

N1395 Ptm. Ap.J., 139, 284, 1964.
Dyn., mass. Ap.J., 139, 284, 1964.

N1393 In N1383-1407 group.

N1399 = PKS 0336-35. Brightest in core of Fornax I Cl. * 0'3 n N.
Ptm. of 50 dwarfs in Cl.: A.J., 70, 559, 1965.
Radio. Ap.J., 157, 481, 1969. M.N., 152, 439, 1971.

N1398 Descr., class. P.A.S.P., 81, 51, 1969.
Photo. J.R.A.S.Canada, 68, 117, 1974.

N1404 In Fornax I Cl. * 0'9 sf N. P(a) w. N1399 at 10'2.
Photo. J.R.A.S.Canada, 68, 117, 1974.

N1400 P(a) w. N1407 at 11'8. In group N1383-1407.

N1427A In Fornax I Cl.

I0343 In N1383-1407 group.

N1407 Brightest of N1383-1407 group. P(a) w. N1400 at 11'8.
Radio. A.J., 75, 523, 1970.

N1409, 1410 = III Zw 55 = K 93. Close pair at 10". N1410 is the northern comp. and a class 1 Seyfert.
Photo. Ap.J., 160, 405, 1970 (where obj. called N1409 is N1410). "Nuclei of Galaxies", p.81, 1971.
Spec. photo: Ap.J., 192, 581, 1974.

N1415, 1416 P(a) at 9'3.

N1416 Note corr. to NGC Dec.

N1422 P(a) w. N1426 at 31'.

N1417 = Ho 70a. P(a) w. N1418 at 5'0.

I0346 In N1383-1407 group.

N1418 = Ho 70b. P(a) w. N1417 at 5'0.

N1421 Dyn., mass. Bull.A.A.S., 1, 186, 1969.

N1425 In Fornax I Cl.? HII reg. "Atlas and Catalogue", Univ. of Washington, Seattle, 1966.

- N1427 Fornax I Cl. * 1'8 p.
- N1433 Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967.
Photo., P.A.S.P., 77, 287, 1965. Vistas in Ast., vol.14, 242, 1972.
Ptm. Atl. Gal. Austr., 1968.
- N1428 Fornax I Cl. * superimposed on N.
- A0340+39 Brightest E in a group.
Ptm. V,R: A.J., 75, 695, 1970.
- N1426 P(a) w. N1422 at 31', N1439 at 30'.
- N1424 = N1429. P(a) w. N1417 at 19', N1418 at 14'5.
- N1437 Fornax I Cl. Posit., Photo. A.J., 76, 775, 1971.
- I0342 Brightest in UMa-Cam cloud, possibly w. Maffei 1 and 2 (A0232+59, A0238+59).
Photo. Pub. U.S. Naval Obs., XX, Part IV, 1971. A.&A., 29, 249, 1973. Ap.J., 194, 559, 1974.
Ptm. Pub. U.S. Naval Obs., XX, Part IV, 1971.
HI reg. Ap.J., 194, 559, 1974.
Dist. Modulus. Nature, 231, 35, 1971. Ap.J., 194, 559, 1974.
HI 21 cm. Ap.J., 176, 315, 1972. A.&A., 22, 111, 1973. IAU Symp. 58, p.122, 1974.
Radio. Ap.J., 142, 1333, 1965. A.&A., 29, 249, 1973.
Poss. SN Rem.: A.&A., 26, 105, 1973. Supernovae & SN Remnants, Ap. & Space Sc. Lib., vol.45, p.56, 1974.
- N1439 P(a) w. N1426 at 30'.
- N1440 = N1442. P(a) w. N1452 at 22'.
- N1448 = N1457. Radio. Aust. J. Phys., 16, 360, 1963.
- N1452 = N1455. P(a) w. N1440 at 22'.
- N1441 In N1441-1453 group. P. w. N1449 at 4'2, N1451 at 6'1.
- N1449, 1451, 1453 In N1441-1453 group. N1453 is brightest.
- I2006 In Fornax I Cl.?
- N1482 P. w. N1481 at 3'3.
SN1937e. A.N., 290, 85, 1967.
- N2573 Close to South celestial Pole. Note R.A. and precession. See also two nearby obj. N2573 A and B at 22h 30, -89°26'.
- N1487 = VV 78. Pec. coll. system?
Descr., dim. P.A.S.P., 83, 310, 1971.
Ptm. Atl. Gal. Austr., 1968. 2.2 μ (up. limit), M.N., 164, 155, 1973.
- N1469 Note corr. to NCG posit. = MCG 11-5-4.
- N1493 Radio. Aust. J. Phys., 19, 883, 1966.
- A0356+10 = 3C 98. Mag. and colors reduced w. dim. on PSS (0'30 x 0'25)
Descr., class. Ap.J., 140, 35, 1964.
Ptm. U,B,V,R: Ap.J., 178, 25, 1972; 183, 731, 1973.
Radio. Ap.J., 142, 106, 1965; 144, 568, 1966; 147, 24, 1967; 179, 439, 1973. Sov.A.J., 9, 238, 1965.
A.J., 73, 1, 1968. M.N., 156, 377, 1972. A.&A., 34, 341, 1974.
- N1485 Note corr. to coord.
- N1510 Blue compact E comp. of N1512 at 5'0.
- N1507 = K 97. Photo. Vistas in Ast., vol.14, 213, 1972.
Dyn., mass. Bull.A.A.S., 1, 186, 1969. Vistas in Ast., vol.14, 239, 1972.
HI 21 cm. Source R2 (A.&A., 3, 292, 1969), quality D, rejected.
- N1515A P(a) w. N1515 at 2'0.
- I0356 = Arp 213.
Photo. and Ptm. Pub. U.S. Naval Obs., XX, Part IV, 1971.
HI 21 cm. A.J., 79, 767, 1974.
Radio. no detection: A.&A., 28, 379, 1973.
- N1512 P(a) w. N1510 at 5'0.
- N1515 P(a) w. N1515A at 2'0. and sev. s. gal. in field.
Ptm. Atl. Gal. Austr., 1968.
- N1518, 1521 Pair at 22'.
- N1527 N betw. 2 * at 1'2 n and s.
- I2038 P(a) w. I2039 at 1'5.

N1533 Photo. M.N., 131, 351, 1966.
Ptm. Atl. Gal. Austr., 1968.
SN1970? IAU Cir. No.2279, 1970; not confirmed.

N1536 Ptm. Atl. Gal. Austr., 1968.

N1531, 1532 Pair at 1'8. N1532: discordant vel. source N2 (Observ., 87, 38, 1967) rejected.

A0410+29 = V Zw 372. Bright N, F halo; "jets" E and W simulate bar.

N1537 Note corr. to NGC Dec.

N1543 Ptm. Atl. Gal. Austr., 1968.

N1549 P. w. N1553 at 12'.
Photo. M.N., 131, 351, 1966.
Ptm. Atl. Gal. Austr., 1968.

N1553 P. w. N1549 at 12' np, I2058 at 21'5 sf.
Photo. M.N., 131, 351, 1966. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Atl. Gal. Austr., 1968.
Spec. Discordant V = + 1035, Source M (M.N.A.S.S.A., 22, 100, 1963) rejected.

I2058 P(a) w. N1553 at 21'5.

N1559 Photo. M.N., 131, 351, 1966.
Ptm. Atl. Gal. Austr., 1968.
Radio. Aust. J. Phys., 19, 883, 1966.

N1530 = VII Zw 12, $m_p = 13.4$

N1566 Class 1 F var. Seyfert N ($B_N = 13.5 - 14.5$), $B_T(\text{excl. N}) = 10.35$.
Photo. M.N., 131, 351, 1966. Publ. Dept. A. Univ. Texas, II, 2, No.7, 1968. Ap.Let., 11, 21, 1972.
 Ap.J., 181, 31, 1973; 189, 187, 1974. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Atl. Gal. Austr., 1968. A.J., 73, 858, 1968. Ap.Let., 11, 21, 1972. Ap.J., 181, 31, 1973;
 189, 187, 1974. Att...Conv. Sci. Osserv. Cima Ekar, Padova-Asiago, p.101, 1973 = Cont. Asiago
 No.300 bis. I.R. 1-3.5 μ : M.N., 164, 155, 1973.
Spec. Ap.Let., 6, 155, 1970; 11, 21, 1972.
Sptm. Ap.J., 189, 187, 1974. A.G.A., 33, 331, 337, 1974. M.N., 168, 109, 1974.
Dist. modulus. M.N., 131, 365, 1966. Ap.J., 181, 31, 1973.
Radio. Aust. J. Phys., 16, 360, 1963. M.N., 152, 439, 1971.

N1574 * 0'35 sf N, B * 1'2 sf N.

A0422-00 = Mk 615. P. w. N1568A,B (= II Zw 10) at 3' np.

A0423+69 = VII Zw 14. P(c) at 35". Redshift is for E compact only.

N1569 = Arp 210 = VII Zw 16.
Descr. Ap.J.Let., 191, L21, 1974; 194, L119, 1974.
Photo. Sov. A.J., 6, 224, 1962. IAU Symp. 29, p.434, 1968. Pub. U.S.Naval Obs., XX, Part IV, 1971.
 P.A.S.P., 86, 845, 1974. Ap.J.Let., 191, L21, 1974; 194, L119, 1974.
Ptm. Pub. U.S. Naval Obs., XX, Part IV, 1971.
Sptm. P.A.S.P., 77, 90, 1973.
Interfer. H. Ap.J., 194, L119, 1974.
HI 21 cm. Ap.J., 150, 8, 1967.
Radio. Unusual spect. A.J., 78, 18, 1973. Ap.J.Let., 194, L119, 1974.

N1596, 1602 Pair at 3'0. N1596 has * 0'6 p N.

N1560 = I2062

I2082 P(c)? w. s comp. In a cluster in Doradus. Possibly a cD galaxy (T = -4?)
 Mag. and colors reduced w. dim. in Atl. Gal. Austr. (1'6 x 0'9).

N1587, 1588 = II Zw 12 = Ho 76a,b = K 99. Connected pair at 1'2. N1589 at 12'.
 N1588 = Mk 616 is about 1 mag. fainter than N1587.
Radio. IAU Symp. 44, p.222, 1972.

N1589 P. w. N1587, 1588 at 12'. $m_p = 12$ in MCG, vol.III, 1963. $m_p = 13.8$ in CGCG, vol.V, 1965.

N1590 = II Zw 13. Pec. spiral.

N1573 = VII Zw 18. Connected pair. Brightest in a group.

N1599 In N1600 group.

N1600 Brightest in a group. P(a) w. N1601 at 1'6, N1603 at 2'5.
Ptm. V,B,R: A.J., 75, 695, 1970. Ap.J., 183, 731, 1973.

N1601, 1606 In N1600 group.

- A0430+05 = 3C 120 = 4C 05.20 = II Zw 14. Class 1 Seyfert N. Previously known as var. star BW Tau.
Prec. Pos. A.J., 78, 521, 1973.
Dim. unresolved N: A.J., 73, S175, 1968.
Photo. A.J., 73, 927, 1968. Ap.J., 152, 1101, 1968.
Cat. Selected Compact Galaxies, Fig. 5, 1971.
Ptm. U,B,V and var. studies: Ap.J., 152, 1101, 1968; 158, 535, 1969; 178, 25, 1972; 180, 687, 1973.
 Ap.J.Let., 150, L177, 1967; 172, L25, 1972; 178, L51, 1972. A.J., 73, 885, 1968. Ap.Let., 2, 77, 1968. Nature, 225, 365, 1970. Ap. Space Sc., 10, 402, 1971. M.N., 152, 79, 1971; 169, 357, 1974. Inf. Bull. V.S., No.703, 1972. Sov.A.J., 16, 763, 1973. Tokyo Ast. Bull., 2nd ser., No.228, 1974.
Isodens.: P.A.S.P., 86, 870, 1974.
I.R. 1-6-21u: A.J., 73, 868, 1968. Ap.J.Let., 159, L165, 1970; 176, L95, 1972.
M.N., 169, 357, 1974.
Spec. P.A.S.P., 79, 369, 1967. Ap.J.Let., 148, L57, 1967; 149, L51, 1967; Ap.J., 152, 1101, 1968; 176, 75, 1973. A.J., 73, 847, 1968.
Photo. Ap.J., 192, 581, 1974.
Sptm. A.J., 73, 855, 1968. Ap.J.Let., 150, L173, 1967. Ap.J., 164, 1, 1971; 176, 75, 1972; 191, 309, 1974. Bull. A.A.S., 4, 208, 1972. "Nuclei of Galaxies", p.151, 1971. IAU Symp. 44, 144, 1972. A.&A., 27, 433, 1973.
Pol. Ap.J.Let., 148, L53, 1967. Astrofizika, 7, 417, 1971.
Radio. Ap.J., 144, 216, 1966; 146, 294, 1966; 148, 367, 1967; 152, 639, 1968; 154, 423, 1968; 161, 1, 793, 1970; 193, 55, 303, 1974. Ap.J.Let., 151, L27, 1968; 152, L169, 1968; 154, L49, 1968; 175, L55, 1972; 178, L51, 1972; 183, L47, L51, 1973. A.J., 73, 1, 293, 873, 874, 1968; 74, 824, 1969; 76, 537, 1971; 77, 342, 810, 819, 1972; 78, 163, 536, 1973; 79, 1232, 1974. Ap.Let., 7, 225, 1970; 8, 153, 1971. Sov.A.J., 13, 21, 1969. Bull.A.A.S., 4, 207, 314, 1972.
Mem.R.A.S., 77, Part 3, 1972. IAU Symp. 44, p.232, 1972. A.&A., 25, 303, 1973. Tokyo Ast. Bull., 2nd ser., No.228, 1974.
V.L.B.I.: Ap.J., 153, 705, 1968; 159, 337, 1970; 169, 1, 1971; 170, 207, 1971; 172, 299, 1972. Ap.J.Let., 153, L209, 1968; 173, L147, 1972.
γ-rays. Poss. detec.: Sov.A.J., 15, 879, 1972.
- N1617 Photo. M.N., 131, 351, 1966.
Ptm. Atl. Gal. Austr., 1968.
- N1614 = Arp 186 = II Zw 15 = Mk 617. Note corr. to NGC R.A.
Photo. IAU Symp. 29, 421, 1968.
Ptm. I.R., 5, 10, 21u: Bull. A.A.S., 4, 223, 1972. Ap.J.Let., 176, L95, 1972.
Spec. IAU Symp. 29, p.421, 1968. Ap.J., 178, 113, 1972. Discordant vel. ($V_0 = 6706$, Source K3, Ap.J., 160, 405, 1970) rejected.
Dyn., mass. Ap.J., 178, 113, 1972.
- A0432-01 = II Zw 17. E, $m_p = 15.6$.
- N1615 = MCG 3-12-5
- N1618 In N1618-1625 group. P(a) w. N1622 at 7'8.
- A0434-10 = Mk 618. Seyfert N. Spec. Astrofizika, 10, 315, 1974.
- N1622, 1625 In N1618-1625 group. Pair at 10'2. N1622 = Ho 77a (Ho 77b at 1'4 is prob. a *).
- A0435+11 = II Zw 18. F N in F halo or outer arms, $m_p = 17.3$.
- I0381 Was N1530A in BGC w. wrong coord.
- A0437+04 Anon. in HMS 1956 (A0438 in BGC).
- N1637 Spec. Discordant V: + 528 (Source C, HMS 1956) rejected.
- N1653 $m_p = 12.9$ in CGCG, vol.V., 1965.
- N1654 SN1962p. Inf. Bull. V.S., No.37, 1963. Coll. Int. Novae & SN, CNRS, Paris, p.182, 1965.
- N1659 Sptm. D. Wells, unpubl., Univ. of Texas Dissert., Austin, 1972.
- N1672 Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967. Observ., 88, 227, 1968. Bull.A.A.S., 4, 237, 1972.
Photo. P.A.S.P., 77, 287, 1965. Ap.J., 192, 279, 1974.
Ptm. Atl. Gal. Austr., 1968. U,B,V: Bol.Ast. A. Argentina, No.16, 22, 1971. Ap.J., 192, 279, 1974.
I.R. 1-3.5u: M.N., 164, 155, 1973.
Spec. Observ., 87, 225, 1967.
Sptm. Bol. Ast. A. Argentina, No.16, 22, 1971.
Radio. Aust. J. Phys., 19, 883, 1966. Observ., 88, 227, 1968.
- N1666, 1667 Pair at 15'.
- A0447+03 = II Zw 23 = K 103b. Pec. w. F ext. streamers. Other pec. obj. 1'7 np = K 103a.
Photo. Mem. S.A.Ital., 40, 559, 1969 = K.P.N.O. Cont. No.510. Ap.J., 160, 405, 1970.
"Nuclei of Galaxies", p.81, 1971.
Ptm. 10u: Ap.J. Let., 176, L95, 1972.
Spec. Mem. S. A. Ital., 40, 559, 1969 = K.P.N.O. Cont. No.510.
- N1700, 1699 Pair at 6'6.
- I0398 P(a) w. N1726 at 17'5.
- A0456+05 $m_p = 12$ in MCG, vol.III, 1963. $m_p = 14.4$ in CGCG, vol.I, 1960.

N1720 P(a) w. N1726 at 8'2. Note corr. to NGC R.A.
 N1723 $m_p = 12$ in MCG, vol.IV, 1968.
 N1726 P(a) w. N1720 at 8'2, I0398 at 17'5.
 A0459+03 = II Zw 28. Mag. and colors reduced w. dim. on PSS (0'45 x 0'45). Ring gal.
Dim. of ring: Ap.J., 194, 569, 1974.
Photo., Ap.J., 160, 405, 1970. "Nuclei of Galaxies", p.81, 1971.
 N1741A,B = Arp 259. Pec. interacting system. P(b) w. I0399 at 2'2 sf. Db1. compact HII pair (N1741C,D)
 (T = +11) in front of comp. A.
Descr., Dim., Photo., IAU Symp. 29, p.423, 1968.
HI 21 cm. A.J., 79, 767, 1974.
 I0399 P(b) w. N1741A,B. Mag. and colors reduced w. dim. on PSS (0'55 x 0'45).
 N1779 P. w. I 402 at 14'5.
 N1792 Descr., class. J.R.A.S.Canada, 68, 117, 1974.
Photo. Ap.J., 140, 80, 1964. A.J., 76, 775, 1971.
Rot., mass. Ap.J., 140, 80, 1964.
HI 21 cm. Source R2 (A.&A., 6, 456, 1970) quality D, rejected.
 N1800 Close pair at 0'2. Pec.
 N1808 Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967.
Photo. P.A.S.P., 77, 287, 1965. Ap.J., 151, 99, 1968. Ap.Let., 6, 65, 1970.
 J.R.A.S.Canada, 68, 117, 1974.
Ptm. U,B,V: Ap.J., 192, 279, 1974. I.R. 1-3.5 μ : M.N., 164, 155, 1973.
Spec. Observ., 87, 225, 1967. Ap.Let., 6, 65, 1970.
Sptm. Ap.J., 192, 279, 1974.
Rot., mass. Ap.J., 151, 99, 1968; 184, 735, 1973.
Radio. Aust. J. Phys., 16, 360, 1963; 19, 883, 1966. Proc. A.S. Austr., 2, 159, 1972.
 A0507-00 = II Zw 32. E compact, member of a Cl.
 A0508-02 = II Zw 33. Very pec. obj. w. several knots and jets.
 A0509-14 = H.A., 85, No.6 (A0509 in BGC).
 N1832 Sptm. Ap.J., 163, 249, 1971.
Rot., mass. Ap.J., 154, 857, 1968; 184, 735, 1973.
Radio. Aust. J. Phys., 21, 193, 1968.
 A0510-33 = DDO 231. Low surf. br., magellanic dwarf.
Photo. Observ., 83, 256, 1963.
 A0513+06 In Abell 539. At s end of chain of 3 E.
Diam. Ap.J., 173, 485, 1972.
Ptm., V,V-r: A.J., 75, 695, 1970.
Spec. Mean V_0 of group: 8447 km s⁻¹ ("Nuclei of Galaxies", p.351, 1971).
 A0515+00 = II Zw 36. Close pair at 0'2. Spec. Cat. Selected Compact Galaxies, 1971.
 A0518-45 = Pic A.
Descr., class. Ap.J., 140, 35, 1964.
Radio. A.J., 71, 927, 1966. Ap.J., 147, 24, 1967.
 N1875 = Arp 327 = VV 169. E w. halo, triplet of distorted gal. at 1'4 f.
Spec. mean V_0 of group: 9087 km s⁻¹ ("Nuclei of Galaxies", p.351, 1971).
 N1888, 1889 = Arp 123. Close pair P(b) at 0'3 of large Sc w. F outer arm and small E0 in contact.
 N1889: Ptm. Ap.J., 139, 284, 1964. 10 col.: Ap.J., 179, 731, 1973.
Spec., vel. disp. Ap.J., 179, 55, 1973.
Dyn., mass. Ap.J., 139, 284, 1964; 179, 731, 1973.
 A0524-69 Large Magellanic Cloud. Local Group. P(b) w. Small Magellanic Cloud at 21°.
 For Reviews and References see the Small Magellanic Cloud = A0051-73
 N1947 Ptm. Atl. Gal. Austr., 1968. A.J., 74, 335, 1969.
 N1954 P. w. N1957 at 5'1.
 N1964 HII reg. "Atlas and Catalogue", Univ. of Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
 N1961 = I2133 = Arp 184. Sc w. Pec. outer arm and v F streamers.
HI 21 cm. up. limit: Observ., 83, 245, 1963.
 A0548-31 = PKS 0548-317. E near PKS 0548-322, a BL Lac obj. in a cluster of gal.
 at $z = 0.042$. See Ap.J.Let., 193, L103, 1974.

A0553+03 = II Zw 40. Pec. w. compact core and plumes and jets.
Descr. Ap.J.Let., 162, L155, 1970. "Isolated HII reg."
Photo. Mem. S.A.Ital., 40, 559, 1969 = K.P.N.O. Cont. No.510. Ap.J., 160, 405, 1970.
 "Nuclei of Galaxies", p.81, 1971.
Ptm. U.B.V: Ap.J.Let., 162, L155, 1970. I.R: 1.6, 2.2 μ : "Nuclei of Galaxies", p.81, 1971.
 10 μ : Ap.J.Let., 176, L95, 1972.
Spec. Photo. Ap.J., 160, 405, 1970. "Nuclei of Galaxies", p.81, 1971.
tracing: Mem.S.A.Ital., 40, 559, 1969 = K.P.N.O. Cont. No.510.
Sptm. Ap.J.Let., 162, L155, 1970. Ap.J., 173, 25, 1972.
HI 21 cm. A.&A., 8, 124, 1970. Ap.Let., 12, 63, 1972. IAU Symp. 44, p.264, 1972.
Radio. A.&A., 20, 461, 1972.

N2139 = I2154.

N2188 P. w. anon. RSB(r)O⁺ at 16'.
Photo. Ap.J., 140, 1304, 1964. A.J., 76, 775, 1971. Vistas in Ast., vol.14, p.214, 1972.
Rot., mass. Ap.J., 140, 1304, 1964.
HI 21 cm. Source R2 (A.&A., 3, 292, 1969) quality D, rejected.

A0609+71A P. w. A0609+71B (= Mk 3) at 6'5.

A0609+71B = Mk 3. Class 2 Seyfert N.
Photo. Ap.J., 183, 29, 1971.
Ptm. Ap.J., 171, 5, 1972.
Spec., photo.: Ap.J., 159, 405, 1970; 192, 581, 1974.
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972.
Radio. Izv. V.U.Z. Radiofizika, 16, 1342, 1973.

N2146 = 4C 78.06 = K 110a. P(b?) w. N2146A at 19' nf.
Rot. vel. A.&A., 8, 364, 1970.
HII reg. Bull. A.A.S., 6, 343, 1974.
Radio. Sov. A.J., 13, 881, 1970. A.J., 78, 18, 1973. Ap.J., 189, 399, 1974.
 A.&A., 31, 447, 1974.

N2207, I2163 Interacting pair at 1'4.

N2207 SN1975. IAU Cir. Nos. 2738, 2743, 2753, 1975.
Radio. Aust. J. Phys., 21, 193, 1968.

N2146A = K 110b. P(b?) w. N2146 at 19' sp.

A0617+59A,B = VII Zw 68 Nos. 1, 2 = K 112. Connected pair at 0'7.

A0618-37 = PKS R.S. Dble system.

N2217 HI 21 cm. Source R2 (A.&A., 6, 456, 1970), quality D, rejected.

A0635+75 = Mk 5. Prob. late-type dwarf system.
HI 21 cm. A.&A., 22, 281, 1973.

A0636+53 e. compact, m_p = 15.6 in CGCG, vol.3, 1966.

A0637+53 Dble system at 5' from preceding compact.

N2258 Note corr. to NGC R.A. in DII.

N2273B P. w. N2273 (= Mk 620) at 40' nf.

A0644-74 Ring gal. w. spherical A comp. inside ring; in a group of E or L.
Photo. Observ., 80, 23, 1960; 94, 290, 1974.
Ptm., Spec. Observ., 94, 290, 1974.

N2273 = Mk 620. P. w. N2273B at 40' sp. m_p = 12 in MCG, vol.I, 1962.

I0450 = Mk 6. Class 2 Seyfert. P. w. I0451 at 6'5.
Ptm. U.B.V: Ap.J., 171, 5, 1972.
Spec. Ap.J., 159, 405, 1970. Ap.J.Let., 164, L109, 1971; 171, L35, 1972; 172, L101, 1972.
Ast. Tsirk. No.591, 1970.
Sptm. Astrofizika, 7, 389, 1971; 8, 187, 1972; 9, 39, 139, 1973. Ap.J., 171, 5, 1972.
Radio. Ast. Tsirk. No.715, 1972. Ap.J., 191, 633, 1974.

I0451 P. w. I0450 (= Mk 6) at 6'5.

N2290, 2291, 2294 In a group of S w. N2288, 89. Note corr. to NGC coords.

A0648+26 e. compact, m_p = 15.2 in CGCG, vol.II, 1963.

A0648+27 B2 R.S., compact. m_p = 14.9 in CGCG, vol.II, 1963. P. w. F Sb at 3'6 sp.

A0650+69 m_p = 12.9 in CGCG, vol.IV, 1968. m_p = 14 in MCG, vol.I, 1962.

I2174, N2314 Pair at 5'7.

N2314 Note corr. to NGC Dec.

A0704+61 m_p = 12 in MCG, vol.I, 1962. m_p = 13.1 in CGCG, vol.IV, 1968.

N2326A m_p = 15 in MCG, vol.I, 1962. N2326 [SB(s)] at 4'8 np.

N2329 Brightest in Abell 569.
 Diam. Ap.J., 173, 485, 1972.
 Ptm. V, V-r: A.J., 75, 695, 1970.

A0705+71 "Integral sign" gal.
 Photo. Ap.J., 150, 783, 1967; 171, 13, 1972.
 Ptm. Isodens.: Ap.J., 171, 13, 1972.
 Dist. Modulus. Ap.J., 153, 699, 1968. A.&A., 39, 341, 1975.
 Dyn. mass. Ap.J., 150, 783, 1967.
 HII reg. Ap.J., 171, 13, 1972.
 HI 21 cm. A.&A., 39, 341, 1975.

N2341, 2342 = K 125. Pair at 2'5. $m_p = 13.7$, 12.6 in CGCG, vol.II, 1963.

A0706+71 $m_p = 12.7$ in CGCG, vol.IV, 1968. $m_p = 14$ in MCG, vol.I, 1962.

A0708+73A,B = Arp 141 = VV 123. "Ring galaxy" w. distorted ring. Mag. and colors for comp. A reduced w. dim. on PSS (1'1: x 0'7).
 Photo. Ap.J., 148, 321, 1967.
 Diam. Ap.J., 194, 569, 1974.
 Dyn. Ap.J., 142, 1346, 1965.

N2276 = Arp 25 = VII Zw 134 = NB 85.4 R.S. = K 127a. P(b) w. N2300 at 6'0 (= Arp 114).
 Photo. Astrofizika, 4, 319, 1968; 6, 367, 1970; 9, 21, 1973.
 Ptm. Astrofizika, 6, 367, 1970; 9, 21, 1973.
 SNI962q. Ast. Tsirk. No.399, 1967. Astrofizika, 3, 133, 1967.
 SNI968v. Ast. Tsirk. Nos.458, 461, 466, 1968. Astrofizika, 4, 319, 1968.
 SNI968w. Ast. Tsirk. Nos. 468, 480, 1968. Astrofizika, 9, 21, 1973.
 HI 21 cm. A.J., 79, 767, 1974 (extens. tow. N2300).
 Radio. M.N., 135, 149, 1967.

I2179, N2347 = K 128. Pair at 13'2.

A0713+63 = Mk 379. $m_p = 14.8$ in CGCG, vol.IV, 1968.

N2300 = K 127b = Arp 114 w. N2276 at 6'0. I1455 at 10'; other gal. in field.
 Ptm. Ap.J., 139, 284, 1964. 10 col. Ap.J., 179, 731, 1973.
 Dyn. mass. Ap.J., 139, 284, 1964.

N2369 Radio. Aust. J. Phys., 19, 883, 1966.

N2336 = K 132a. P(a) w. I0467 at 20'. Note corr. to NGC coord.

A0718-34 = PKS R.S., E, $m_p = 16.5$. Note large gal. obscur.

A0720+58 $m_p = 12.7$ in CGCG, vol.IV, 1968.

N2397, 2397A Pair at 10'.

I0467 = K 132b. P(a) w. N2336 at 20'. Note corr. to IC coord.

A0722+72 = Mk 7 = VII Zw 153. Asym, one-arm S?
 Photo. Astrofizika, 7, 521, 1971; 10, 159, 1974.
 Ptm. Astrofizika, 10, 159, 1974.
 Sptm. A.&A., 41, 61, 1975.
 HI 21 cm. A.&A., 22, 281, 1973, 41, 61, 1975.

A0722+30 = Bol. R.S. Dble system. P. w. S at 1'5.

N2377 = 3C 178 = PKS 0722-09 = UGC A0132. Note large galactic obscur.
 Descr. Aust. J. Phys., 19, 713, 1966. Ap.J.Let., 149, L51, 1967.

N2366 = DDO 42 = K 133. Note corr. to Dec. Mk 71 = N2363, is bright HII reg. 3' sp center.
 Photo. Ap.J., 190, 525, 1974; 191, 603, 1974.
 Ptm. B blue * and Seq.: Ap.J., 191, 603, 1974.
 HII reg., Dist. modulus. Ap.J., 190, 525, 1974.

I2184 = Mk 8 = VII Zw 156 = K 135. Pec.
 Photo. Astrofizika, 7, 521, 1971; 10, 159, 1974.
 Ptm. Astrofizika, 10, 169, 1974.
 Spec. Astrofizika, 8, 529, 1972. A.&A., 33, 113, 1974.
 Sptm., HI 21 cm. A.&A., 41, 61, 1975.

N2379 In N2389 group. Note corr. to coord. in A.&A.Suppl., 12, 89, 1973. N2378 = ** 1'3 np.

N2389 Brightest in group. P(a) w. N2388, SB(s)b, at 3'4.
 Rot. vel. A.&A., 8, 364, 1970.

A0727+63 = Mk 73. Prob. spiral. Photo. Astrofizika, 7, 521, 1971.

I2200, I2200A Pair at 1'4.

A0728+60 = VII Zw 162. Irr., pec.
 Spec. A.&A., 33, 113, 1974.

- N2403 In M81 group. N2404=* at $7^h 32^m 9^s.7$, $+65^\circ 48' 30''$.
Photo. Ann.Ap., 38, 698, 1965 = Pub. O.H.P., 7, No.50, P.A.S.P., 78, 495, 1966; 84, 844, 1972.
A.&A., 24, 411, 1973; 29, 231, 1973. Ap.J., 190, 525, 1974.
Ptm. Var *, Cep.: Ap.J., 151, 825, 1968. B blue * and Seq.: Ap.J., 191, 603, 1974.
Dist. modulus: Ap.J., 151, 825, 1968; 191, 603, 1974.
Sptm. Ap.J., 168, 327, 1971.
Rot. mass. A.&A., 7, 210, 1970; 24, 405, 411, 1973.
HII reg. Ann.Ap., 28, 698, 1965 = Pub. O.H.P., 7, No.50, "Atlas and Catalogue", Univ. of Washington, Seattle, 1966. Ap.J., 155, 417, 1969; 190, 525, 1974.
Interfer. Ha. A.&A., 7, 210, 1970.
SN1954j. Ap.J., 151, 825, 1968 (descr. as vB blue var.). P.A.S.P., 84, 844, 1972.
HI 21 cm. Ap.J., 142, 616, 1965; 150, 8, 1967; 166, 265, 1971; 176, 315, 1972.
A.&A., 1, 10, 1969; 24, 405, 411, 1973.
Radio. A.&A., 29, 231, 1973.
- A0732+58 = Mk 9. Bright N, F corona. Class 1 Seyfert. Mag. and colors reduced w. dim. on PSS (0'55 x 0'45)
Descr., class. Ap.J.Let., 152, L103, 1968.
Photo. A.J., 73, 891, 1968. Astrofizika, 4, 475, 587, 1968.
Ptm. U,B,V: Ap.J.Let., 152, L103, 1968. Ap.J., 171, 5, 457, 1972.
2, 10 μ : Ap.J.Let., 176, L95, 1972.
Spec. A.J., 73, 891, 1968. Ap.J.Let., 152, L103, 1968. IAU Symp. 44, p.160, 1972.
Sptm. Astrofizika, 7, 389, 1971. IAU Symp. 44, p.160, 1972. Ap.J., 171, 5, 1972.
Pol. Astrofizika, 7, 417, 1971.
- A0733+63A,B Pair at 6'. Coord. in MCG, vol.I, is for obj. A (spir.), but descr. and diam. are for obj. B (E comp.). Coord. in A.&A.Suppl., 12, 89, 1973 is for *.
- N2415 = Haro 1 (Bol. Tonantzintla No. 14, June 1956).
Diam. A.J., 75, 1143, 1970.
Ptm. U,B,V: A.J., 73, 882, 1968; 75, 1143, 1970.
HI 21 cm. A.&A., 29, 217, 1973.
Radio. Nature, 219, 1032, 1968.
- N2427 Ptm. Atl. Gal. Aust., 1968.
- N2442 N2443 is part of same. Radio. Aust. J. Phys., 19, 883, 1966.
- A0737+65 = Mk 78. Class 2 Seyfert.
Descr., Photo. Ap.J., 179, 417, 1973.
Ptm., Sptm. Ap.J., 171, 5, 1972.
Spec. Ap.J., 173, 7, 1972; 179, 417, 1973. Bull.A.A.S., 4, 213, 1972.
Radio. Izv. V.U.Z. Radiofizika, 16, 1342, 1974.
- A0738+49 = Mk 79. Class 1 Seyfert.
Ptm. U,B,V: Astrofizika, 7, 169, 1971. Ap.J., 171, 5, 1972. Sov.A.J., 17, 169, 1973.
B(pg) var.: M.N., 167, 1P, 1974. 10 μ : Ap.J.Let., 176, L95, 1972.
Spec. Ap.J., 163, 441, 1971; 173, 7, 1972; 192, 581, 1974.
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972. Sov. A.J., 18, 275, 1974.
Radio. Izv. V.U.Z. Radiofizika, 16, 1342, 1973.
- A0741+29 = K 140a.
- I0469 Note corr. to IC Dec.
- A0743+61 = Mk 10. Class 1 Seyfert.
Descr. Ap.J.Let., 152, L103, 1968.
Photo. A.J., 73, 891, 1968. Astrofizika, 4, 475, 587, 1968; 7, 521, 1971.
Ptm. U,B,V: Ap.J.Let., 152, L103, 1968. Ap.J., 171, 5, 1972. Astrofizika, 7, 769, 1971.
Sov. A.J., 16, 763, 1973; 17, 169, 1973. 10 μ (up. limit) Ap.J.Let., 176, L95, 1972.
Spec. Ap.J.Let., 152, L103, 1968. A.J., 73, 891, 1968. IAU Symp. 44, p.160, 1972.
Ast. Tsirk. No.592, 1970.
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972. IAU Symp. 44, 160, 1972.
- A0743+74 = Mk 11. P. w. A0744+74 (= Mk 12) at 5'8.
Spec. prev. reported as obj. w. blue cont., no line (Astrofizika, 4, 587, 1969).
- N2444, 2445 = Arp 143 = VV 117. Ring gal. w. distorted ring. Dim. Ap.J., 194, 569, 1974.
Photo. Ap.J., 148, 321, 1967. A.&A., 28, 379, 1973.
Ptm. U,B,V: Ap.J., 194, 569, 1974.
Dyn. Ap.J., 142, 1346, 1965.
Radio. A.&A., 28, 379, 1973. Nature, 24, 260, 1973.
- A0744+74 = Mk 12. P. w. A0743+74 (Mk 11) at 5'8.
Photo. Astrofizika, 7, 521, 1971.
Sptm. A.&A., 41, 61, 1975.
HI 21 cm. A.&A., 22, 281, 1973.
- N2466 * 0'65 sf N. P. w. sB anon. gal. 3'7 np.
- A0745+56A,B Pair at 2'5. Ident. of comp. A (= MCG 9-13-66) with 4C 56.16 has been rejected. Central compact comp. of DA240 is ident. w. F E at $7^h 44.6$, $+55^\circ 57'$ (= MCG 9-13-57) w. same redshift ($z = 0.0356$) as A0745+56A. (see Nature, 250, 625, 1974).
- N2441 Note corr. to NGC R.A.
- A0746+34 Noted as v. compact, long jet in CGCG, vol.III, 1966. $m_p = 15.5$.
- I2209 = Mk 13. P(a) w. N2460 at 5'5. Photo. Astrofizika, 7, 521, 1971.

A0752+39 = Mk 382. Class 1 Seyfert.
 N2460 P(a) w. I2209 at 5'5 sp.
 N2474, 2475 = K 147. Close pair.
 A0754+58 = DDO 48. HI 21 cm. A.&A., 34, 43, 1974.
 N2484 = 4C 37.21. NRAO 276. $m_p = 14.9$ in CGCG, vol.III, 1966.
 N2487 = K 150b
 N2493, 2495 Pair at 1'9. N2495 = Mk 383 is compact and 2.5 mag. fainter than N2493.
 N2500 In group w. N2541, 2552.
HII reg. and Dist. modulus. Ap.J., 194, 559, 1974.
 N2507 = Ho 92a (Ho 92b is a *).
 N2512 = Mk 384 = UGC 4191.
 A0804+39 = Mk 622. Poss. weak Seyfert. Spec. Astrofizika, 10, 315, 1974.
 N2521 = VII Zw 212. Connected w. F compact at 0'25 and w. VII Zw 215 at 6'5 nf.
 A0804+04 e compact in CGCG, vol.I, 1960. $m_p = 14.9$.
 N2523B P(a) w. N2523 at 8'8 f.
 N2535, 2536 = Ho 94a,b = Arp 82 = VV 9 = K 156. P(b) at 1'8. Long distorted arm opposite N2535.
Photo. and Spec. A.&A., 3, 418, 1969.
HI 21 cm. A.J., 79, 767, 1974.
 N2523 = Arp 9. P(a) w. N2523B at 8'8 p.
 N2543 = I2232 = K 157.
 N2537 = Mk 86 = Arp 6 = VV 138. P(a) w. N2537A at 4'5, I2233 at 19'.
Photo. Vistas in Ast., vol.14, p.221, 1972.
 N2537A = VV 138. P(a) w. N2537 at 4'5.
 I2233 P. w. N2537 at 19'. Note revised class. One of the flattest gal. Exactly edge-on.
Photo. IAU Symp. 58, p.14, 1974.
 N2541 In group w. N2500, 2552.
 N2545 In Cancer Cl. Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
 A0811+58 In Abell 634.
Diam.: Ap.J., 173, 485, 1972.
Ptm. V,V-r: A.J., 75, 695, 1970.
 A0813+70 = Holmberg II (1958) = DDO 50 = Arp 268 = VII Zw 223. In M81 group.
Photo. Ap.J., 190, 525, 1974; 191, 603, 1974.
Ptm. B blue and red *: Ap.J., 191, 603, 1974.
HII reg. "Atlas and Catalogue", Univ. of Washington, Seattle, 1966.
 Ap.J., 156, 847, 1969; 190, 525, 1974.
Dist. modulus: Ap.J., 190, 525, 1974.
HI 21 cm. Ap.J., 150, 8, 1967. IAU Symp. 44, p.12, 1972.
Radio. A.J., 78, 18, 1973.
 A0814+21 SN1962f and Photo. P.A.S.P., 75, 236, 1963.
Radio. Poss. SN Rem. (OJ 224): IAU Symp. 44, p.82, 1972.
 N2554 In Cancer Cl.
 N2552 In group w. N2500, 2541.
 A0815+20 In Cancer Cl.
 N2544 = K 160a.
 N2557 In Cancer Cl.
 N2566 In a compact group of B gal., Klemola No.10 (A.J., 74, 804, 1969).
 A0816+21 In Cancer Cl.
Descr., Photo., Spec. Ap.J., 185, 115, 1973. (+ vel. of 7 other anon. obj.)
 N2565 = Mk 386. In Cancer Cl.
SN1960m. and Photo. P.A.S.P., 73, 175, 1961.
 A0817+21 In Cancer Cl.
SN1960d and Photo. P.A.S.P., 73, 175, 1961.
 N2562 In Cancer Cl.

N2563 In Cancer Cl.
Diam. Ap.J., 173, 485, 1972.
Ptm. B,V,R: Ap.J., 183, 731, 1973.

A0818+16 P. w. anon. comp. at 1' f.
Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.

N2578 P. w. anon. SB(s) at 3'0.

N2551 Sev. other F spir. in field.

N2577, 2575, A0820+22 In Cancer Cl.

N2583 = MCG-1-22-8. In a group w. N2584 and 2585 (=MCG-1-22-9, -10)

I2338, 2339 = Arp 247 = K 161. P(b) at 0'7. In Cancer Cl.
HI 21 cm. A.J., 79, 767, 1974.

I2341 In Cancer Cl.

N2582 In Cancer Cl.

I2363 SN1961b and Photo. P.A.S.P., 74, 215, 1962.

A0823+21 In Cancer Cl.
SN1960n and Photo. P.A.S.P., 73, 175, 1961.

A0824+55 = Mk 88 = I Zw 14.
Spec. "Catalogue of Selected Compact Galaxies..." 1971.

N2595 = III Zw 59. In Cancer Cl.
HI 21 cm. Source R2 (A.&A., 23, 253, 1973) quality D, rejected.

I2378 In Abell 671.
Diam. Ap.J., 173, 485, 1972.
Ptm. V, V-r: A.J., 75, 695, 1970.

A0825+17 Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.

A0825+52 = Mk 89. HI 21 cm. A.&A., 22, 281, 1973.

A0826+52 = Mk 90. Poss. SB. Photo. Astrofizika, 7, 521, 1971.

A0828+75 = Mk 15. Anon. S sp. 1'1 np.

A0829+19A,B = Arp 58. Compact comp. at end of long knotty arm.
Photo. A.&A., 3, 418, 1969.
Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.
Spec. A.&A., 3, 418, 1969.

N2599 = Mk 389.
SN1965p and Photo. P.A.S.P., 81, 224, 1969.

A0832+66 = Mk 93 ≠ UGC 4490. Mag. and colors reduced w. dim. on PSS (0'75 x 0'30).

A0832+46 = MK 92. Mag. and colors reduced w. dim. on PSS (0'45 x 0'35).

N2608 = Arp 12. Dble N or * superposed on N.
SN1920a. P.A.S.P., 35, 116, 1923.

N2616 = PKS 0833-01, E?

A0834+51A Mk 94 (A0834+51B) is a giant HII reg. 0'6 sf brightest part of A. V = +753±38 (Source K3,Z1,Z2).
Photo. Astrofizika, 10, 173, 1974.
Ptm. U,B,V (Mk 94): Astrofizika, 10, 173, 1974.

A0835-02 Noted as e compact, $m_p = 14.5$ in CGCG, vol.I, 1960.

N2623 = Arp 243 = VV 79. Chaotic B central part w. bright knots and two long streamers at opposite ends.
Descr. and Photo. P.A.S.P., 77, 94, 1965.

N2642 P(a) w. anon. Sm? at 3'2.

N2629 = MCG 12-9-10. P. w. N2641 at 6'5 ssf.

I2389 In a group. P(a) w. N2636 at 8'.

N2633 = Arp 80 = K 169. Brightest in a group. P(a) w. N2634 at 8'2.
Rot. Vel. A.&A., 8, 364, 1970.

N2634 P(a) w. N2633 at 8'2, N2634A at 2'.
Ptm. 10 col. Ap.J., 179, 731, 1973.

N2663 = PKS 0843-33. Bright E. Note high gal. obscuration.

N2634A P(a) w. N2634 at 2'.

N2656 = 4C 54.17. Dble system.

A0844+70 = Mk 95. Mag. and colors reduced w. dim. on PSS (0'60 x 0'30).
 N2654 Note corr. to NGC R.A.
 A0845+46 = Mk 96. e compact on PSS. Mag. and colors reduced w. dim. on PSS (0'35 x 0'35).
 N2672, 2673 = Arp 167 = K 175. Ho 99a,b. Pair at 0'6. Brightest in a group.
 N2673 is compact w. F curved extension.
 Ptm. 10 col.: N2672, Ap.J., 179, 731, 1973.
 A0846+72 = Mk 98. Photo. Astrofizika, 7, 521, 1971.
 A0847+76 m_p = 12 in MCG, vol.I, 1962. m_p = 13.5 in CGCG, vol.IV, 1968.
 A0847+29 = Mk 628. Noted as e compact in CGCG, vol.II, 1963. m_p = 15.3.
 N2655 = Arp 225.
 Sptm. A.&A., 19, 405, 1972.
 Pol. Ap.J.Let., 179, 193, 1973.
 Radio. A.J., 75, 523, 1970.
 N2683 Photo. and Ptm. A.J., 72, 1032, 1967.
 Rot. Vel. A.&A., 8, 364, 1970.
 N2681 Ptm. 12 col.: Ap.J., 145, 36, 1966. 5 col.: A.J., 73, 313, 1968.
 HI 21 cm. Source R2 (A.&A., 21, 103, 1972), quality D, rejected.
 I2421 = K 178a.
 N2691 = Mk 391 = MCG 7-18-64. Class 1 Seyfert.
 Sptm., HI 21 cm. A.&A., 41, 61, 1975.
 N2685 = Arp 336.
 Photo. IAU Symp. 29, p.434, 1968.
 Ptm. Isodens.: A.J., 79, 671, 1974.
 Spec. C.R.Acad. Sc.Paris, 260, 3287, 1965 = Pub. O.H.P., 7, No.44.
 HI reg. Ap.J.Suppl., 27, No.239, 1974.
 HI 21 cm. Bull. A.A.S., 6, 332, 1974. A.J., 79, 767, 1974.
 N2698 In a group w. N2690, -95, -97, -99, 2702, -06.
 N2692 = K 179b.
 N2693, 2694 Pair at 1'. N2694 is compact.
 N2708 P. w. N2709 at 8'.
 A0854+66 = Mk 100 = UGC 4687.
 N2713 P. w. N2716 at 11'.
 Photo. Mem.S.A.Ital., 42, 145, 1971 = Cont. Asiago No.254.
 SN1968e. IAU Cir. No.2061, 1968. Ast. Tsirk. Nos.465, 468, 1968; 498, 1969. P.A.S.P., 80, 466, 1968.
 Mem.S.A.Ital., 42, 145, 1971 = Cont. Asiago No. 254.
 N2716 = Ho 104a (Ho 104b at 1'8 is a dble *). P. w. N2713 at 11'.
 A0855+06 Zwicky (1971) obj. No.1 linked to No.2 at 1'4 np.
 Photo. and Spec. "Catalogue of Selected Compact Galaxies", 1971.
 N2722 = MCG -1-23-14. Note corr. to NGC R.A., MCG Dec.
 N2721 m_p = 12.5 in MCG, vol.III, 1963.
 N2719, 2719A = Arp 202 = Ho 105a,b = K 181. Pair at 0'4. F fragments to east of smaller obj.
 A0858+60 = Mk 18 ≠ UGC 4750. N2726 at 12' s is the obj. meas. for redshift in Source K3
 (Ap.J., 159, 765, 1970).
 N2735, 2735A = Arp 287 = VV 40. Zwicky (1971) obj. 1 & 2. P(b) at 0'7.
 Spec. "Catalogue of Selected Compact Galaxies", 1971.
 A0901+51 = Mk 101. HI 21 cm. A.&A., 22, 281, 1973.
 N2726 = UGC 4750. Mk 18 at 12' n. Incorrectly listed as Mk 18 in Source K3 (See A0858+60).
 N2744, 2749 In a group w. N2745, -47, -51, -52. N2749 is brightest.
 N2750 = K 186. m_p = 12.7 in CGCG, vol.II, 1963 and MCG, vol.II, 1964.
 N2752 In N2749 group.
 N2770 = Ho 111a. P. w. Ho 111c at 3'0 (Ho 111b at 3'3 np is a *).
 N2732 P(a) w. anon. SO sp. w. eBN at 4' f.
 N2775 P. w. N2777 at 11'.
 N2768 Pol. Ap.J.Let., 179, L93, 1973.
 HI 21 cm. up. limit: A.J., 77, 568, 1972.

- N2748 Rot. Vel. A.&A., 8, 364, 1970.
- N2777 P. w. N2775 at 11'.
- A0908-08 $m_p = 12$ in MCG, vol.III, 1963.
- N2776 HI 21 cm. M.N., 150, 337, 1970.
- A0909+74 = Holmberg III (1958).
- N2784 Rot. Vel. A.&A., 8, 364, 1970.
- A0910+17 Noted as e compact in CGCG, vol.II, 1963; $m_p = 15.1$.
- A0910+35 B2 R.S., $m_p = 15.4$.
- N2782 = Arp 215. Narrow emis. lines; removed from Seyfert class. Pec N. P(b?) w. anon. SB(s)sp at 11'8.
Descr. and Photo. Pub. Dept. A. Univ. Texas, (II), 2, No.7, 1968. Pub.A.S.Japan, 25, 153, 1973.
Diam. of N: A.J., 73, S175, 1968.
Ptm. A.J., 73, 858, 1968. Pub A.S. Japan, 25, 153, 1973. U,B,V,R,I: A.J., 73, 866, 1968.
 Pub. Dept. A. Univ. Texas, (II), 2, No.7, 1968. I.R. 1.6 to 10 μ : A.J., 73, 868, 1968.
Ap.J.Let., 159, L165, 1970; 176, L95, 1972. M.N., 169, 357, 1974.
Spec., Sptm. Pub.A.S.Japan, 25, 153, 1973.
Rot., mass. J. Observ., 48, 247, 1965 = Pub.O.H.P., 8, No.16. Pub.A.S.Japan, 25, 153, 1973.
Radio. A.&A., 15, 110, 1971; 33, 351, 1974.
- A0911+47 Photo. Mem.S.A.Ital., 42, 145, 1971 = Cont. Asiago No.254.
SN1966a. IAU Cir. No.1949, 1966. Ast.Tsirk. Nos. 355, 392, 394, 1966. Mem.S.A.Ital., 42, 145, 1971.
- A0913+74 $m_p = 12.8$ in CGCG, vol.IV, 1968. $m_p = 15$ in MCG, vol.I, 1962.
- A0913+53 = Mk 104. Photo. Astrofizika, 7, 521, 1971.
- N2822 In glare of β Eri.
- N2793 Poss. interaction w. small anon. SB(rs)? at 1'7.
- N2798, 2799 = Arp 283 = VV 50 = K 195 = Ho 117a,b. P(b) at 1'5.
Photo. A.&A., 25, 187, 1973.
HI 21 cm. A.J., 79, 767, 1974. All data listed for N2798.
Radio. A.&A., 25, 187, 1973 (+10 other R.S. nearby). Nature, 241, 260, 1973.
- A0915-11 = Hydra A, 3C 218. Dble N. In a cluster.
Photo. Ap.J., 140, 35, 1964.
Ptm. U,B,V: A.J., 74, 335, 1969. Ap.J., 178, 1, 1972.
Radio. Ap.J., 142, 106, 1965; 144, 568, 1966; 147, 908, 1967; 161, 1, 1970. A.J., 71, 927, 1966;
 78, 536, 1973. Ap.Let., 8, 153, 1971. Sov.A.J., 9, 238, 1965. Mem.R.A.S., 77, Part 3, 1972.
- A0915+71 = Mk 105. Mag. and colors reduced w. dim. on PSS (0'40 x 0'25).
- N2823 = B2 0916+34 In Abell 779.
- N2805 = Ho 124b. Multiple interacting syst. w. N2814, 2820 at 13' and I2458.
- N2830, 2831, 2832 = Arp 31 = Ho 123a,b,c. N2832 brightest; N2831 compact. In Abell 779.
 N2832: Diam. Ap.J., 173, 485, 1972. Ptm. B,V,R: Ap.J., 183, 731, 1973.
- N2830 = MCG 6-21-14.
- N2831 = MCG 6-21-13.
- A0917+71 = Mk 20 (= Mk 107). Photo. Astrofizika, 7, 521, 1971.
Spec. Discrep. Vel. (+8700) in Source K3 (Ap.J., 173, 7, 1972) was rejected.
- N2814 = Ho 124c. P. w. N2820 at 3'7.
Descr. and Phys. data: A.J., 79, 1242, 1974.
- I2458 = Mk 108 = VII Zw 276 = Ho 124d. Listed as N2820A in BGC.
 P(b) w. N2820 at 2'1.
- N2820 = Ho 124a. P(b) w. I2458 at 2'1. N2814 at 3'7. In group w. N2805.
- N2848 = Ho 128a. N2847 (= Ho 128c?) is a * inv. in N2848. Ho 128b at 1'1 is prob. a *.
 P(a) w. N2851 at 5'2.
- N2841 Descr. and class. "Nuclei of Galaxies", p.27, 1971.
Photo. A.J., 69, 236, 1964; 70, 564, 1965. IAU Symp. 38, p.11, 1970. "Nuclei of Galaxies", p.27,
 1971. A.&A., 29, 57, 1973.
Ptm. A.J., 73, 313, 1968; 74, 50, 1969. Sov. A.J., 10, 440, 1966.
Rot. vel. A.&A., 8, 364, 1970.
HII reg. Ap.J., 194, 559, 1974.
SN1912a. P.A.S.P., 29, 213, 1917.
SN1957a. A.J., 69, 236, 1964; 70, 564, 1965.
SN1972r. IAU Cir. Nos. 2476, 2498, 1973. A.&A., 29, 57, 1973.
- N2844 Brightest in a group w. N2852 at 17'5, N2853 at 16'5.
- N2855 P(a?) w. small anon. SB(s)b at 7'0.

A0919+47 = Mk 109 = K 198a.

N2852, 2853 = K 199. In a group w. N2844 at 17'5.

I2469 $m_p = 12$ in MCG, vol.IV, 1968.

N2865 * at 7" on minor axis.

N2859 Ptm. Bull.A.A.S., 5, 349, 1973.

N2872, 2874 = Arp 307 = Ho 130a,b. Pair at 1'3. N2873 (= Ho 130d) 1'9 n of N2874.
N2875 is a *. N2871 (= Ho 130c) is also a *.

N2883 Ptm. 1.6 μ : M.N., 164, 155, 1973.

A0923+68 = Mk 111 = VII Zw 280 = Arp 300(a) = VV 106 b. P. w. another S at 1'2 f.
The Mk gal. is western comp. Other obj. in field.

N2884, 2889 Pair at 12'8.

I2476 = B2 0924+30 In a subgroup in background of N2893 group.

N2915 Note revised class. Dwarf system.

N2893 = Mk 401. Brightest in a group.
Sptm., HI 21 cm. A.&A., 41, 61, 1975.

N2907 P(a) w. anon. S sp. at 5'4. Other F gal. in field.

N2903 Descr., class. P.A.S.P., 79, 152, 1967; 81, 51, 1969. IAU Symp. 38, p.29, 1970. Small interact.
group 33' WSW ($V = 10200 \text{ km s}^{-1}$): Ap.J., 183, 791, 1973.
Photo. Ann.Ap., 28, 698, 1965 = Pub.O.H.P., 7, No.50. IAU Symp. 29, p.434, 1968. P.A.S.P., 81, 51, 1969. A.&A., 29, 231, 1973. Ap.J., 194, 559, 1974. Pub.A.S.Japan, 26, 289, 1974.
Ptm. A.J., 73, 313, 1968; 74, 344, 1969. Pub.A.S.Japan, 26, 289, 1974.
I.R. 10, 21 μ : Ap.J.Let., 176, 195, 1972.
Spec. vel. field. Ap.J., 159, 405, 1970. Bull.A.A.S., 3, 352, 1971; 6, 321, 1974.
Pub. A.S.Japan, 26, 289, 1974.
Sptm. Ap.J., 163, 249, 1971. Ap.J.Let., 193, L49, 1974. A.&A., 19, 405, 1972; 27, 433, 1973.
Sov.A.J., 13, 593, 1970.
Pol. Astrofizika, 7, 417, 1971.
Rot., mass. A.&A., 8, 364, 1970. Ap.J., 184, 735, 1973.
HII reg. Ann.Ap., 28, 698, 1965 = Pub. O.H.P., 7, No.50. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969; 194, 559, 1974. Bull.A.A.S., 5, 349, 1973.
Dist. modulus: Ap.J., 194, 559, 1974.
Radio. Aust.J.Phys., 16, 360, 1963. Ap.J., 144, 553, 1966; 150, 413, 1967; 183, 791, 1973.
A.J., 78, 18, 1973. A.&A., 29, 231, 1973.

A0930+55A,B = Mk 116 = I Zw 18. Close pair of blue compacts at 5"6.
Descr., dim. Ap.J.Let., 162, L155, 1970.
Photo. Ap.J., 143, 192, 1966.
Ptm. M.N., 152, 79, 1971.
Spec. Ap.J., 143, 192, 1966.
Sptm. Ap.J.Let., 162, L155, 1970. Ap.J., 173, 25, 1972. "Nuclei of Galaxies", p.81, 1971.
HI 21 cm. A.&A., 8, 424, 1970. IAU Symp.44, p.264, 1972.

N2911 = Arp 232. * 25" np N. P(a) w. N2912 at 1'3, 2914 at 4'8. In N2911-2919 gr.
Spec. Ap.J.Let., 164, L35, 1971.
Pol. Ap.J.Let., 179, L93, 1973.
HII reg. Ap.J.Suppl., 27, No.239, 1974.
Radio. Aust.J.Phys., 19, 565, 1966. Ap.J., 157, 481, 1969. A.J., 75, 523, 1970.
Ap.Let., 6, 49, 1970. IAU Symp. 44, 222, 1972.

N2914 = Arp 137. F blob at end of northern arm. P(a) w. N2911 at 4'8. In N2911-2919 group.

A0931+11 Noted e compact in CGCG, vol.I, 1960; $m_p = 15.2$.

N2919 In N2911-2919 group.

N2916 HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966.

N2935 SN1975. IAU Cir. No.2782, 1975.

N2936, 2937 = Arp 142 = VV 316. Ring gal.
U,B,V: For both comp. (Source N): $\log A = 1.35$, $V = 12.68$, $B-V = +0.87$, $U-B = +0.14$.
Dim. ring: Ap.J., 194, 569, 1974.
Photo. Ap.J., 148, 321, 1967.
Spec. Ap.J., 148, 321, 1967; 194, 569, 1974.

A0936+71 = Holmberg I (1958) = DDO 63. In M81 group.
Photo. Ap.J., 190, 525, 1974; 191, 603, 1974.
Ptm. B Blue *: Ap.J., 191, 603, 1974.
HII reg., Dist. modulus, Ap.J., 190, 525, 1974.

N2944 = Arp 63 = VV 82. In Cat. Selected Compact Gal., 1971. P(b) w. attached dIm at east end.
Spec. A.&A., 33, 113, 1974.

A0936-04A,B,C,D,E = Arp 321 = VV 116. Compact quintet of interacting galaxies.
Descr., Spec. Ap.J., 185, 797, 1973.

A0936+32A,B = Arp 129 = VV 83 = III Zw 60 = K 209. P(b) at 25". Star superposed on N of comp. A.
Photo. Ap.J., 172, 247, 1972.
Spec., Sptm. Ap.J., 173, 247, 1972.

A0937+21 = Mk 403. Moderately broad lines. Possibly Sy N.
Spec. Ast. Tsirk. No.798, 1973. Astrofizika, 10, 315, 1974.

N2950 Ptm. Bull.A.A.S., 5, 349, 1973.
Rot. vel. A.&A., 8, 364, 1970.

N2964 = K 210a. Mk 404 is an HII reg. in gal. P(a) w. N2968 at 5'8. Brightest in a group.
Spec. (Mk 404): Astrofizika, 10, 315, 1974.

N2974 At 87' from Quintet A0936-04A,B,C,D,E. See Ap.J., 185, 797, 1973.
Radio. Ap.J., 183, 791, 1973.

A0940+66 = Mk 119. This obj. is not N2909 (N2909 is a dble *).

N2968 = K 210b. P(a) w. N2964 at 5'8, N2970 at 4'6.
Descr., Phys. data. A.J., 79, 1242, 1974.
Photo. Mem.S.A.Ital., 44, 65, 1973 = Cont.Asiago No.284. "Supernovae & SN Remnants", Ap.& Space Sc.
Lib., vol.45, p.215, 1974.
SN19702. IAU Cir. No.2287, 1970. Mem.S.A.Ital., 44, 65, 1973 = Cont. Asiago No.284.
"Supernovae & SN Remnants", Ap. & Space Sc.Lib., vol.45, p.215, 1974.
The SN was half-way between N2968, 2970.

N2970 = Mk 405. P(a) w. N2968 at 4'6.

N2978, 2980 Pair at 10'.

A0940, 0941-05 = Arp 253 = VV 52. P(b) of edge-on systems at 1'4, both elongated EW.

N2959, 2961 = K 211.

A0941+29 = Mk 406. Moderately broad lines. Possibly Sy N.
Spec. Ast. Tsirk. No.798, 1973. Astrofizika, 10, 315, 1974.

N2986 P. w. anon. SA sp. at 2'4.

A0942+09 SN1954z and Photo. P.A.S.P., 86, 516, 1974.

N2957A,B Close pair in contact. Mk 121 is comp. A, a compact E.
Pair w. N2963 (= Mk 122) at 2'8.

N2976 In M81 group.

N2963 = Mk 122. Spec. Prev. reported as blue cont., no line (Ap.J., 173, 7, 1972).

N2992 = Arp 245. P(b) w. N2993 at 2'9. F out. extens. w. knots at end.
Blue Stel. Obj. (Weedman 2) at 2'5 n.
Photo., Spec. Ap.J.Let., 178, L43, 1972.
Ptm. and Sptm. Ap.J., 192, 279, 1974.

A0943+46 = I Zw 21. Ptm. P.A.S.P., 85, 533, 1973.

A0943+54A,B Pair at 1'6. Comp. A = 4C 54.19.1.

N2993 = Arp 245. P(b) w. N2992 at 2'9.
Photo. and Spec. Ap.J.Let., 178, L43, 1972.

N2997 Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967.
Photo. P.A.S.P., 77, 287, 1965. Observ., 87, 225, 1967. Ap.J., 192, 279, 1974.
Ptm. Atl.Gal.Aust., 1968. Ap.J., 192, 279, 1974.
Spec. Observ., 87, 225, 1967.
Sptm. Ap.J., 192, 279, 1974.
Radio. Aust.J.Phys., 16, 360, 1963.

I0563, 0564 = Arp 303 = Ho 143a,b. Pair at 1'7. Listed as A0944A,B in BGC.

N2998 = Ho 144a. P(a) w. anon. SB(s)mp at 4'5 sf. Brightest in group N2998-3010.

N3003 SN1961f and Photo. Cont. Asiago No.174, 1965. "Stellar Structure", vol.VIII, "Stars and Stellar Systems", p.396, 1965.
Spec. Ann.Ap., 27, 300, 1964. Coll.Int."Novae & SN", CNRS, Paris, p.175, 1965.

N2985 P(a) w. N3027 at 25'.

A0946+55 = Mk 22. Photo. Astrofizika, 4, 475, 1968.

A0947+34 SN1965e. IAU Cir.Nos.1901, 1905, 1965. Ast. Tsirk. No.322, 1965. P.A.S.P., 78, 471, 1966 (w.Photo.).

N3023 = K 216b.

A0947+28 = Haro 22 (Bol. Tonantzintla No.14, June 1956). Note corr. to coord. in A.&A.Suppl., 12, 89, 1973.
Descr. and Photo. Ap.J.Let., 150, L31, 1967.

- N3020 = Ho 147a. Pair w. N3024 (Ho 147b). Multiple system w. N3016, 3019 = (Ho 147c,d).
- A0947+31 = DDO 64. Photo. and Spec. P.A.S.P., 84, 592, 1972.
- N3024 = Ho 147b. Pair w. N3020; multiple system w. N3016, 3019.
- N3021 Mass, M/L. Bull.A.A.S., 1, 186, 1969.
- A0950+36 SN1963u. P.A.S.P., 76, 325, 1964.
- N3044 Mass, M/L. Bull.A.A.S., 1, 186, 1969.
- N3027 P(a) w. N2985 at 25'. Poss. member M81 group.
Rot. vel. A.&A., 8, 364, 1970.
HII reg. and Dist. modulus: Ap.J., 194, 559, 1974.
- N3031 = M 81 = K 218a.
Descr. Outer ring feature: Science, 148, 363, 1965. Sov.A.J., 10, 1057, 1967; 12, 715, 1969.
F Comp.: A.&A., 32, 117, 1974 (See A0953+69 = DDO 66 = Ho IX).
Struct. P.A.S.P., 84, 61, 1972.
Photo. Science, 148, 363, 1965. A.J., 72, 1032, 1967. P.A.S.P., 79, 600, 1967. Ap.J.Suppl., 24, No.210, 1972. A.&A., 29, 231, 1973.
Ptm. 12 col.: Ap.J., 145, 66, 1966. 5 col.: A.J., 73, 313, 1968. U.B.V.: Ap.J., 157, 55, 1969.
Surf. Ptm. Isoph. A.J., 72, 1032, 1967. Astrofizika, 7, 407, 1971. Ap.J.Suppl., 24, No.210, 1972. Ap.J., 192, 311, 1974. Bull. A.A.S., 4, 224, 1972; 5, 448, 1973.
I.R. 1.64u: Sov.A.J., 12, 184, 1968.
Spec. A.&A., 9, 45, 1970. Int. motions: Ap.J., 192, 311, 1974. Bull.A.A.S., 4, 332, 1972.
Sptm. Observ., 88, 239, 1968. Ap.J., 154, 33, 1968. Ap.J.Suppl., 22, No.193, 1971.
Ap.J., 178, 617, 1972; 186, 21, 1973. A.J., 74, 150, 1969. C.R.Acad.Sc., Paris, (B), 268, 1397, 1969. Bol. Tonantzintla. 6. No.37, 97, 1971. A.&A., 9, 45, 1970; 10, 401, 1971; 19, 405, 1972; 20, 361, 1972; 27, 433, 1973; 37, 57, 1974. Ap.Let., 14, 1, 1973. IAU Symp. 44, pp.55, 188, 1972.
IAU Symp. 58, 169, 1974. Mol.Abs. H₂O, CO, Ap.Let., 14, 1, 1973.
Pol. A.J., 72, 784, 1967. P.A.S.P., 79, 600, 1967. "Nuclei of Galaxies", p.195, 1971.
Dyn., rot., mass. A.&A., 8, 364, 1970. Ap.J.Suppl., 24, No.210, 1972. Ap.J., 184, 735, 1973; 192, 311, 1974. Bull.A.A.S., 6, 212, 1974.
HII reg. P.A.S.P., 83, 61, 1972.
HI 21 cm. A.&A., 26, 483, 1973; 31, 245, 1974. IAU Symp. 44, p.12, 1972. IAU Symp. 58, p.120, 1974.
Proc. 1st Europ. Astr. Meet., vol.3, p.15, 1974. Bull.A.A.S., 6, 435, 1974.
Radio. Ap.J., 142, 1333, 1965. A.J., 73, 876, 1968. A.&A., 29, 231, 1973. IAU Symp. 58, p.377, 1974. Proc. 1st Europ. Astr. Meet., vol.3, p.1, 1974.
X-rays. in M81-82 group: Bull.A.A.S., 3, 398, 1971.
- N3034 = M82 = K 218b = Arp 337 = 3C 231. In M81 group.
Descr. Struct., Rev. Phys. data. Ap.J., 155, 403, 1969; 166, 7, 1971; 183, 41, 1973. Ap.J.Let., 156, L19, 1969; 157, L27, L29, 1969; 158, L21, L25, 1969; 173, L47, 1972. A.&A., 12, 474, 1971.
A.J., 79, 1242, 1974.
Photo. Ap.J., 139, 1394, 1964; 140, 942, 1964; 157, 1065, 1969; 173, 501, 1972; 176, 57, 1972.
Ap.J.Let., 156, L19, 1969; 157, L27, L29, 1969; 158, L21, 1969; 173, L47, 1972.
Pub. N.R.A.O., 1, 251, 1963. Science, 144, 1382, 1964. P.A.S.P., 78, 495, 1966. IAU Symp. 29, p.470, 1968. A.&A., 9, 181, 1970; 12, 474, 1971.
Ptm. 12 col. Ap.J., 145, 36, 1966. 5 col.: A.J., 73, 313, 1968.
U.B.V.: Ap.J., 143, 1387, 1966; 157, 1065, 1969.
Near and far I.R. (1 to 345u): Ap.J., 143, 1387, 1966. Ap.J.Let., 159, L165, 1970; 161, L79, L203, 1970; 171, L67, 1972; 176, L95, 1972; 182, L89, 1973. Sov.A.J., 12, 184, 1968.
Bull.A.A.S., 1, 248, 1969; 4, 223, 1972. "Nuclei of Galaxies", p.195, 1971.
Absorpt. Nature, 201, 171, 1964 = Uppsala Medd. No. 146.
Spec. Ap.J., 140, 942, 1964; 173, 501, 1972. Ap.J.Let., 156, L19, 1969; 157, L27, 1969.
C.R.Acad. Sc., Paris, 258, 823, 6343, 1964 = Pub.O.H.P., 7, Nos.7, 30. Bull.A.A.S., 1, 264, 1969.
Sptm. Observ., 88, 239, 1968. Ap.J., 160, 429, 1970; 176, 57, 1972. Calif. Inst. Tech. Thesis, Pasadena 1970. Bull.A.A.S., 3, 25, 1971. Izv. Spec. Ap. Obs., 4, 143, 1972.
Pol. Lowell Obs. Bull. V, No.119, 1962; VII, No.149, 1969. Astrofizika, 4, 93, 1968. IAU Symp. 29, p.384, 1968. Ap.J., 176, 57, 1972; 179, 85, 1973; 192, 319, 1974. A.&A., 19, 193, 1972.
Bull.A.A.S., 6, 365, 462, 1974.
Dyn., rot., mass. Ap.J., 140, 942, 1964; 173, 501, 1972. C.R.Acad. Sc., Paris, 258, 823, 6343, 1964.
J. des Observ., 48, 247, 1965 = Pub. O.H.P., 8, No.16. A.&A., 8, 364, 1970. Bull.A.A.S., 1, 370, 1969; 3, 24, 1971.
HII reg. in nucl. Bol. Tonantzintla, 5, No.35, 247, 1970.
Interfer. Ha. IAU Symp. 29, p.470, 1968. A.&A., 9, 181, 1970.
HI 21 cm. A.&A., 9, 155, 1970. IAU Symp. 44, 12, 1972. Ap.J., 191, 639, 1974. P.A.S.P., 83, 609, 1971. Bull.A.A.S., 5, 429, 1973. Vel. from 21 cm emiss. only = +181 ± 9 (Source R: B.A.N, 15, 307, 1961. Source R2: A.&A., 9, 155, 1970.). Discordant V_{emiss.} = +70 (Source R2: A.&A., 3, 281, 1969) rejected.
Radio. Ann.Ap., 26, 343, 1963. Ap.J., 142, 106, 1965; 144, 568, 1966; 146, 621, 1966; 161, 1, 1970; 196, 303, 1974. Ap.J.Let., 173, L47, 1972. A.J., 71, 927, 1966; 78, 536, 1973. Ap.Let., 8, 153, 1971. M.N., 152, 1P, 1971; 168, 491, 1974. A.&A., 18, 481, 1972. IAU Symp. 29, p.347, 1968. 1.8 mm, up. limit: Sov.A.J., 16, 795, 1973. OH: Ap.J.Let., 167, L47, 1971.
X-rays. in M81-82 group, Bull.A.A.S., 3, 398, 1971.
- N3052 P(a) w. N3045 at 16'5.
- A0952+08 In HMS (1956). Was A0953 in BGC.
- I2522, I2523 Pair at 5'.
- A0953+60A = Mk 128, 7' n of A0953+60B (= Mk 23).
- A0953+60B = Mk 23. VII Zw 301. P. w. Mk 128 (A0953+60A) at 7'.

- A0953+69 = Holmberg IX (Ark.f.A., 5, No.20, 1969) = DDO 66. In M81 group.
Descr., and Photo. A.&A., 32, 117, 1974. Other F comp. of M81 at 9h 51.2, +68°50'.
Ptm. A.&A., 32, 117, 1974. Astrofizika, 10, 632, 1974.
- N3067 QSO (3C 232) at 1'9 (z = 0.534); Ap.J., 170, 233, 1971.
Descr., Phys.data. A.J., 79, 1242, 1974.
Photo. Ap.J., 170, 233, 1971.
Ptm. Bull.A.A.S., 5, 349, 1973. A.&A., 37, 7, 1974.
Sptm. A.&A., 37, 7, 1974.
Rot., mass. Ap.Let., 10, 99, 1972.
- N3068A,B = Arp 174. Listed as A0955A,B in BGC. Connected w. F long extension to the s.
- N3078 Radio. Ap.J., 157, 481, 1969. IAU Symp. 44, p.222, 1972.
- A0956+30 = DDO 69. Dwarf Leo A system.
- N3074 SN1965n and Photo. P.A.S.P., 78, 471, 1966. A.N., 289, 247, 1966.
- N3081 Note corr. to NGC R.A.
- A0957+05 = DDO 70. Dwarf Sextans B system.
HII reg. Ap.J.Suppl., 27, No.239, 1974.
- N3073 = Mk 131 = Ho 156b. P. w. N3079 (Ho 156a) at 10'.
Ptm. 10 col.: Ap.J., 179, 731, 1973.
Spec. Prev. reported as blue cont., no line (Ap.J., 173, 7, 1972).
- N3065 = VII Zw 303. P(b) w. N3066 at 3'0.
Ptm. P.A.S.P., 85, 533, 1973.
- N3066 = Mk 133. Zwicky (1971). P(b) w. N3065 at 3'0. (N3063 is a dble *).
Sptm. Astrofizika, 7, 389, 1971.
- N3095 P(a) w. N3100 at 10'0.
- N3091 P(a) w. N3096 at 4'8, and anon. EO at 1'3.
- N3100 P(a) w. N3095 at 10'0.
- N3079 = Ho 156a = 4C 55.19. P. w. N3073 (Ho 156b) at 10' and anon. at 6'5 np.
HI 21 cm. halo search, A.&A., 28, 95, 1973 (no detect.) Source R2 (A.&A., 3, 292, 1969) rejected.
Radio. Ap.J., 144, 553, 1966. A.J., 78, 18, 1973. Ap.J., 189, 399, 1974. A.&A., 31, 447, 1974.
- N3077 In M81 group. Narrow em. lines, not a Sy N (Pub. Dept. A. Univ. Texas, II, 2, No.7, 1968).
Descr., Phys. data. Ap.J., 146, 593, 1966. A.J., 79, 242, 1974.
Photo. Ap.J., 146, 593, 1966; 157, 81, 1969. IAU Symp. 29, p.434, 1968. A.&A., 35, 463, 1974.
Pub. Dept. A. Univ. Texas, II, No.7, 1968.
Ptm. 5 col.: A.J., 73, 313, 1968. U.B.V.: Ap.Let., 1, 171, 1968. A.J., 73, 856, 1968.
II col.: Bull.A.A.S., 5, 549, 1973. I.R.: A.J., 73, 866, 1968. Ap.J.Let., 159, L165, 1970;
176, L95, 1972.
Spec. A.J., 73, 890, 1968. Ap.J., 157, 81, 1969. A.&A., 35, 463, 1974.
Sptm. A.&A., 37, 7, 1974. Izv. Crimean Obs., 50, 115, 1974.
Pol. Pub. Obs. Leningrad, 24, 54, 1967 = Ab. Univ. Leningrad, No.334, 54, 1967.
Rot., mass. Ap.J., 157, 81, 1969. A.&A., 35, 463, 1974.
HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966.
HI 21 cm. IAU Symp. 44, p.12, 1972.
Radio. A.&A., 15, 110, 1971.
- A1000+59 = Mk 25 = VII Zw 308.
Ptm. and Sptm. Ap.J., 171, 5, 1972.
- N3109 = DDO 236. Descr. and Photo. Vistas in Ast., vol.14, p.215, 1972.
Rot., mass. Vistas in Ast., vol.14, p.239, 1972.
HII reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 156, 847, 1969.
HI 21 cm. Ap.J., 142, 616, 1965; 150, 8, 1967. Aust. J. Phys., 19, 687, 1966. A.&A., 22, 27, 1973.
Sov.A.J., 14, 931, 1971.
Radio. Aust. J. Phys., 21, 193, 1968.
- N3104 = Arp 264 = VV 119. Chaotic. Many emiss. knots and F extens.
- A1001+66 = DDO 71 Note corr. to UGC R.A.
Ptm. Astrofizika, 10, 632, 1974.
- I2537 Anon. obj. low surf. br. at 16'.
- N3115 P. w. vF dwarf E w. stellar N at 5'5.
Ptm. 12 col.: Ap.J., 145, 36, 1966. Isoph. Ap.J., 152, 35, 1968.
B.V.: Ap.J., 169, 209, 1971. 2.2u: Nuclei of Galaxies, p.195, 1971.
Spec., vel. disp. IAU Symp. 15, p.112, 1962. Ap.J., 179, 55, 1973. Bull.A.A.S., 3, 476, 1971.
IAU Symp., 58, p.20, 1974.
Sptm. Ap.J., 169, 209, 1971; 175, 649, 1972; 177, 285, 1972. A.J., 74, 50, 1969; 77, 333, 1972.
Mem. S.A.Ital., 43, 263, 1972.
Rot., mass. IAU Symp. 15, p.142, 1962. Ap.J., 179, 55, 1972
- A1003+29 = Haro 23 (Bol. Tonantzintla, No.14, June 1956).
Descr., dim., Ptm. A.J., 75, 1143, 1970.

A1004+53 $m_p = 12$ in MCG, vol.I, 1962. $m_p = 13.8$ in CGCG, vol.VI, 1968.
 N3136 Spec. Discrep. vel. in A.J., 72, 821, 1967 (Source N1) rejected.
 A1005+12 = DDO 74. Leo I (or Regulus) Dwarf system.
 Struct., Phys. data. A.J., 74, 587, 1969. Ann. Rev. Ast. Ap., 9, 35, 1971.
 Dyn. Ap.J., 144, 869, 1966.
 N3143, 3145 Pair at 9'.
 A1008+59 = Mk 26 \neq UGC 5491.
 A1008-04 = DDO 75. Sextans A Dwarf system.
 Photo. Pub. U.S. Naval Obs., XX, Part IV, 1971.
 Ptm. Pub. U.S. Naval Obs., XX, Part IV, 1971. Vistas in Ast., vol.14, p.231, 1972.
 HI reg. Ap.J. Suppl., 27, No.239, 1974.
 HI 21 cm. Ap.J., 150, 8, 1967.
 A1009+57 = Mk 138 = UGC 5494. Note corr. to UGC R.A.
 N3156 In N3166 group.
 N3153 Ptm. Isodens. Ap.J. Suppl., 26, No.230, 1974.
 N3151, 3152 In N3158 group.
 N3158 Brightest in a group. P(a) w. N3160 (S sp.) at 4'8.
 Diam. Ap.J., 173, 485, 1972.
 Ptm. Ap.J., 139, 284, 1964. B.V.R. Ap.J., 183, 731, 1973.
 Dyn., mass. Ap.J., 139, 284, 1964.
 N3165 In N3166 group. P. w. N3166 at 4'8.
 N3159, 3161 = Ho 172c,a. Pair of E at 1'3. In N3158 group.
 N3166 = Ho 173a = K 228a. Brightest of group. P(b) w. N3169 at 7'7. P. w. N3165 at 4'8.
 N3163 = Ho 172b. In N3158 group.
 N3169 = Ho 173b = K 228b. In N3166 group. P(b) w. N3166 at 7'7.
 Rot. vel. A.&A., 8, 364, 1970.
 N3175 P(a) w. anon. S sp. at 5'0.
 N3147 SN1972h. IAU Cir. Nos. 2381, -82, 2431, -34, -52, 1972. Ast. Tsirk. Nos. 670, 700, 716, 723, 1972.
 A.&A., 29, 57, 1973 (w. Photo.)
 A1012+44 = Mk 139. Spec. Prev. reported as cont., no line (Ap.J., 173, 7, 1972).
 N3177 SN1947a. P.A.S.P., 60, 15, 1948.
 N3185 In N3190 group. Radio. Aust. J. Phys., 19, 565, 883, 1966.
 N3187 = Arp 316 = VV 307. In N3190 group. P(b) w. 3190 at 4'8; distorted.
 N3184 Descr. IAU Symp. 38, p.28, 1970.
 HI reg. "Atlas and Catalogue", Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969; 194, 559, 1974.
 Dist. modulus: Ap.J., 194, 559, 1974.
 SN1921b, SN1921c. P.N.A.S., 25, 569, 1939. Zs.f.Ap., 49, 202, 1961.
 SN1937f. "Supernovae & SN Remnants", Ap. & Space Sc. Lib., vol.45, p.207, 1974.
 Radio. Poss. SN Remnant: A.&A., 26, 105, 1973. "Supernovae & SN Remnants", Ap. & Space Sc. Lib., vol.45, p.56, 1974.
 N3190 = Arp 316 = VV 307 = Ho 175a. Brightest of group. P(b) w. N3187 at 4'8. N3193 at 5'5.
 Rot. vel. A.&A., 8, 364, 1970.
 A1015+64 = Mk 141. Class 1 Seyfert N. Mag. and colors reduced w. dim. on PSS (0'50 x 0'35).
 Radio. Izv. V.U.Z. Radiofizika, 16, 1342, 1974.
 N3193 = Arp 316 = Ho 175b. In N3190 group. N3190 at 5'5.
 Ptm. Ap.J., 139, 284, 1964. 5 col.: A.J., 73, 313, 1968. 10 col.: Ap.J., 179, 731, 1973.
 Dyn., mass. Ap.J., 139, 284, 1964.
 HI 21 cm. up. limit: A.&A., 25, 451, 1973.
 I0601, 602 = K 230. Pair at 1'3. Ptm. Isodens. Ap.J. Suppl., 26, No.230, 1973.
 N3200 SN1953d. and Photo. A.J., 75, 672, 1970.
 N3188A, 3188 = Mk 30, 31. Pair at 0'7.
 N3198 Photo. Sov.A.J., 13, 423, 1969.
 Rot. vel. A.&A., 8, 364, 1970.
 SN1966j. IAU Cir. No.1986, 1966; 1992, 1967. Ast. Tsirk. Nos.397, 412, 1967; 674, 1972.
 J. Observ., 51, 5, 1968 = Cont. IAP, Paris, B, No.349. Mem.S.A.Ital., 39, 189, 1968 = Cont.
 Asiago No.205. Sov. A.J., 13, 423, 1969. Izv. Crimean Obs., 41-42, 367, 1970.
 N3203 Note corr. to NGC R.A.

N3183 = Ho 177a. Ho 177b at 3' is a *, but vF comp. at 2'2 nf.
 I2565, 2565A = I Zw 24, Nos. 1 & 2. Pair of compacts at 12". Obj. No.3 at 12" np.
 N3223 = I2571.
 N3221 F compact, II Zw 45, at 3'5 nf. SN1961l. "Stars and Stellar Systems", 8, 376, 1965.
 N3124, 3220 = Ho 182a,b. Pair at 5'1,
 N3226 = Arp 94 = VV 209 = Ho 187b = K 234a, P(b) w, N3227; connected.
Photo. Ap.J., 154, 431, 1968.
Ptm. 10 col.: Ap.J., 179, 731, 1973.
Spec. A.J., 73, 861, 1968. Ap.J., 154, 431, 1968.
Mass. A.J., 73, 661, 1968.
 N3227 = Arp 94 = VV 209 = Ho 187a = K 234b. P(b) w. N3226; connected vF outer extens. Class 2 Seyfert N.
B_T = 15.0, B_T(excl.N) = 11.58. Diam. of N: A.J., 73, S175, 1968.
Photo. Ap.J., 154, 431, 1968. A.&A., 15, 110, 1971. Pub.Dept.A.Univ. Texas, II, 2, No.7, 1968.
Ptm. A.J., 73, 858, 1968. U,B,V: A.J., 73, 866, 1968. Sov. A.J., 17, 169, 1973.
M.N., 169, 357, 1974. Att...Conv. Sci. Osserv. Cima Ekar, Padova-Asiago, p.101, 1973.= Cont.
 Asiago No.300 bis. B(pg) var.: M.N., 167, 1P, 1974. I.R. 1 to 22μ: A.J., 73, 866, 870, 1968.
 Ap.J.Let., 159, L165, 1970; 161, L203, 1970; 176, L95, 1972. M.N., 169, 357, 1974.
 Sov. A.J., 12, 184, 1968.
Spec. A.J., 73, 861, 1968. Ap.J., 154, 431, 1968; 192, 581, 1974.
Sptm. Ap.J.Let., 154, L53, 1968. Ap.J., 162, 743, 1970; 164, 1, 1971. Sov.A.J., 11, 767, 1968.
Ast. Tsirk. No.467, 1968; No.663, 1971. IAU Symp. 29, p.83, 1968. "Nuclei of Galaxies", p.151, 1971.
Pol. Ast. Tsirk. No.454, 1967. Astrofizika, 4, 409, 1968; 7, 417, 1971.
Rot. mass. A.J., 73, 861, 1968. Ap.J., 154, 431, 1968.
HII reg. Bull.A.A.S., 6, 343, 1974.
HI 21 cm. A.&A., 10, 198, 1971. IAU Symp. 44, p.267, 1972.
Radio. Aust. J. Phys., 19, 565, 1966. A. J., 73, 876, 1968. A.&A., 15, 110, 1971; 33, 351, 1974.
 M. N., 167, 251, 1974 (w. N3226).
 A1021+15 HI 21 cm. A.&A., 34, 43, 1974.
 N3239 = Arp 263 = VV 95 = K 236a+b. B * superp. Many emiss. knots, F diff. extens. sf side.
 A1023+13 Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.
 N3245A P(a) w. N3245 at 8'8.
 A1024+20 SN1964m and Photo. P.A.S.P., 78, 471, 1966.
 N3245 P(a) w. N3245A at 8'8.
Ptm. 5 col.: A.J., 73, 313, 1968.
 I2574 = DDO 81 = VII Zw 330. In M81 group.
Photo. Ap.J., 184, 343, 1973; 190, 525, 1974; 191, 603, 1974.
Ptm. B Blue *: Ap.J., 191, 603, 1974.
HII reg. and Dist. modulus: Ap.J., 190, 525, 1974.
HI 21 cm. Ap.J., 150, 8, 1967; 184, 343, 1973.
 A1025+19 = II Zw 47 = III Zw 61 = Haro 24 (Bol. Tonantzintla, No.14, June 56).
Ptm. U,B,V: Ap.J., 160, 405, 1970; may be variable.
 N3256 = VV 65. In Klemola gr. No.12 (A.J., 74, 804, 1969).
Ptm. Atl. Gal. Aust., 1968. I.R. 1-3.5μ: M.N., 164, 155, 1973; 168, 27P, 1974.
Spec. M.N., 168, 27P, 1974; poss. var.
Radio. M.N., 167, 251, 1974.
 N3253 Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.
 N3257 P. w. N3258 at 4'5.
 N3254 SN1941b. A.N., 290, 85, 1967.
 A1026+70A = DDO 80 = VII Zw 331 = VV 294. Satellite attached sf end.
 N3258 P. w. N3257 at 4'5, N3260 at 2'6.
 N3260 P. w. N3258 at 2'6.
 N3261 P(a) w. anon. SA at 8'0.
 N3256C P(b)? w. N3256 at 14'.
 N3262, 3263 Pair at 2'6.
 A1027-35A In N3267-3281 (Antlia) group.
 N3267 In N3267-3281 group. P. w. N3268 at 2'5.
 A1027-35B, N3269 In N3267-3281 group.
 N3268 In N3267-3281 group. P. w. N3267 at 2'5.

N3258B At 3'0 nnp N3273. In N3267-3281 group.
 N3271 = I2585. In N3267-3281 group.
 N3273 In N3267-3281 group. P. w. N3258B at 3'0.
 N3275 P. w. N3275A S sp. at 9'8.
 N3259 P(a) w. N3266 at 18'.
 A1029+54 = Mk 33 = Haro 2 (Bol. Tonantzintla No.14, June 1956).
 Descr., dim.: P.A.S.P., 80, 29, 1968. A.J., 75, 1143, 1970.
 Ptm. A.J., 73, 882, 1968; 75, 1143, 1970. Ap.J., 171, 5, 1972.
 10 μ : Ap.J.Let., 176, L95, 1972.
 Spec. A.J., 73, 882, 1968. P.A.S.P., 80, 29, 1968.
 Sptm. Ap.J., 171, 5, 1972.
 HI 21 cm. A.&A., 22, 281, 1973.
 Radio. Nature, 219, 1032, 1968.
 N3258D, 3281 In N3267-3281 group.
 N3266 P. w. N3259 at 18'.
 SN1950c? Ast. Tsirk., No.300, 1964 (unconfirmed).
 N3252 = UGC 5732 = MCG 12-10-49. Note corr. to NGC coord. in M.N., 71, 509, 1911.
 N3285A P(a) w. N3285 at 12'.
 N3258E, 3281C In N3281 group.
 N3285 P(a) w. N3285A at 12', 3285B at 18'.
 Diam. Ap. J., 173, 485, 1972.
 A1031+11 The ident. w. 4C 11.35 (or PKS) has been rejected.
 N3289, 3281D In N3281 group.
 N3285B P. w. N3285 at 18'.
 N3290 = Arp 53. Asym. arm w. emiss. knots; parallel diff. arm.
 N3288 = K 239b = N3284? P. w. N3286 = K 239a at 4'0.
 N3294 = Ho 202a. N3291 (Ho 202b) at 4'8 is a *. N3304 at 18'.
 The SN in 1955 (noted in BGC) has not been confirmed.
 A1033-27 In Hydra Cl. (Abell 1060).
 N3299 P(a) w. N3306 at 11'8.
 A1033+31 = Arp 267 = DDO 83. v low surf. bright.; a few emiss. knots. * superp. ?
 N3307, 3308 In Hydra Cl. (Abell 1060).
 N3307 = MCG -4-25-29.
 N3309 Brightest in Hydra Cl. (Abell 1060). P. w. N3311 at 1'7.
 Ptm. V, V-r: A.J., 75, 695, 1970 (where mag. is for N3309, redshift for N3311).
 N3303A,B = Arp 192 = VV 71 = K 240. Very pec. spir w. compact comp. and spike. vF outer extens.
 Photo. and Spec. Ap.J., 148, 321, 1967.
 N3306 P(a) w. N3299 at 11'8.
 N3312 = I 629. In Hydra Cl.? Coll. pair at 22'5. Pec. pair at 7'5.
 N3304 P(a) w. N3294 at 18'.
 N3314, A1034-27B In Hydra Cl. (Abell 1060).
 N3318, 3318B Pair at 10'5.
 N3316 In Hydra Cl. (Abell 1060).
 N3310 = Arp 217. Descr. P.A.S.P., 79, 152, 1977.
 Photo. Ap.J., 147, 416, 1967. Cont. Asiago, No.172, 1965.
 Ptm. Ap.J., 147, 316, 1967. Astrofizika, 3, 529, 1967.
 Spec. Cont. Asiago, No.172, 1965.
 Rot. mass. Cont. Asiago No. 172, 1965. Ap.J., 147, 416, 1967. A.&A., 8, 364, 1970.
 SN1974. IAU Cir. No. 2641, 1974.
 HI 21 cm. A.J., 79, 767, 1974.
 Radio. A.J., 78, 18, 1972. A.&A., 15, 110, 1971; 31, 447, 1974.
 N3319 Rot. vel. A.&A., 8, 364, 1970.
 HI reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
 A1037-27 In Hydra Cl.?
 SN1965d. IAU Cir. No.1898, 1965. Ast. Tsirk. No.319, 1965.
 P.A.S.P., 78, 471, 1966 (w. photo.)

- N3338 Leo Group.
HII reg. Atlas and Catalogue, Univ. of Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
- N3347 P(a) w. N3354 at 3'5, N3358 at 8'5. In Klemola Gr. No.16 (A.J., 74, 804, 1969).
Ptm. Atl. Gal. Austr., 1968.
- N3329 Brightest in a group of 12 gal. P(a) w. anon. SBC at 7'2.
- N3346 HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
- N3358 P. w. N3347 at 8'5.
Ptm. Atl. Gal. Aust., 1968.
- N3351 = M95. Leo (M96) Group.
Descr. P.A.S.P., 77, 287, 1965; 79, 152, 1967.
Photo. IAU Symp. 44, p.56, 1972. Sov.A.J., 17, 643, 1944.
Ptm. 12 col.: Ap.J., 145, 36, 1966. 5 col.: A.J., 73, 313, 1968. 7 col.: Izv. Crimean Ast. Obs., 52, 71, 1974. U.B.V: Sov.A.J., 16, 71, 1972. Astrofizika, 3, 529, 1967. Surf. ptm. Pub.Byurakan Obs., No.40, p.15, 1969. Sov.A.J., 17, 643, 1974. Isodens. Ap.J.Suppl., 26, No.230, 1973.
Sptm. A.&A., 27, 433, 1973. C.R.Acad.Sc., Paris, B, 272, 909, 1971.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J.Suppl., 27, No.239, 1974.
Radio. Aust.J.Phys., 19, 565, 1966.
- N3353 = Mk 35 = Haro 3 (Bol. Tonantzintla No.14, June 1956).
Descr., dim. Ap.J.Let., 150, L31, 1967. P.A.S.P., 80, 29, 1968. A.J., 75, 1143, 1970.
Photo. Ap.J.Let., 150, L31, 1967.
Spec. A.J., 73, 882, 1968. P.A.S.P., 80, 29, 1968.
Ptm. A.J., 73, 882, 1968; 75, 1143, 1970. Ap.J., 171, 5, 1972.
Sptm. Ap.J., 171, 5, 1972.
- N3359 Descr. P.A.S.P., 79, 152, 1967.
Photo. Izv. Crimea Obs., 45, 162, 1972.
Ptm. 7 col.: Izv. Crimea Obs., 45, 162, 1972. IAU Symp. 44, p.62, 1972.
Rot., vel. A.&A., 8, 364, 1970.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
Bull.A.A.S., 5, 349, 1973.
HI 21 cm. Ap.J., 150, 8, 1967. Bull.A.A.S., 6, 435, 1974.
- N3348 Ptm., dyn., mass. Ap.J., 139, 284, 1964.
SN1974. IAU Cir. No. 2641, 1974.
- N3367 The ident. with 4C 14.37 has been rejected.
Ptm. Pub.Byurakan Obs., No.40, 15, 1969.
Isodens. Ap.J.Suppl.26, No.230, 1973.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
- N3368 = M 96. Brightest in Leo Group.
Ptm. U,B,V,R,I,J,K,L: Ap.J., 143, 187, 1966. 5 col.: A.J., 73, 313, 1968.
Isodens. Ap.J.Suppl., 26, No.230, 1973.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Bull.A.A.S., 6, 343, 1974.
- N3370 Rot. vel. A.&A., 8, 364, 1970.
- N3377A = DDO 88. P. w. N3377 at 7'0.
Photo. Ann. Rev. Ast. Ap., 9, p.35, 1971.
- N3377 Leo (M 96) Group. P. w. N3377A (= DDO 88) at 7'0.
Photo. Ann. Rev. Ast. Ap., 9, 35, 1971.
Ptm. 12 col.: Ap.J., 145, 36, 1966. 5 col.: A.J., 73, 313, 1968.
- N3379 = M 105 = Ho 212a. Leo (M 96) Group. P(a) w. N3384 at 7'2, N3389 at 10'3.
Diam. Ap.J., 173, 485, 1972.
Photo. Ap.J., 139, 284, 1964.
Ptm. Ap.J., 139, 284, 1964. 5 col.: A.J., 73, 313, 1968. 10 col.: Ap.J., 179, 731, 1973.
U,B,V: Bull. A.A.S., 5, 348, 1973. A.J., 79, 835, 1974.
Isodens. Ap.J.Suppl., 26, No.230, 1973.
Sptm. Ap.J., 154, 22, 1968; 175, 649, 1972; 177, 285, 1972. A.J., 74, 50, 1969.
IAU Symp. 58, p.169, 1974.
Dyn., mass. Ap.J., 139, 284, 1964.
HI 21 cm. up. limit, A.&A., 25, 451, 1973.
- A1045+66 = VII Zw 346 = K 248b. Small E in contact w. spir. = K 248a on np side.
- N3381 $m_p = 12.8$ in CGCG, vol.III, 1966. $m_p = 13$ in MCG, vol.II, 1964.
- N3384 = Ho 212b. Leo (M 96) Group. P(a) w. N3379 at 7'2.
Photo. Ap.J., 139, 284, 1964.
Ptm. 5 col.: A.J., 73, 313, 1968.
Pub. Byurakan Obs., No.40, 15, 1969. Bull.A.A.S., 5, 348, 1973. A.J., 79, 835, 1974.
Isodens. Ap.J.Suppl., 26, No.230, 1973.
- A1045+26 SN1971u. IAU Cir. No.2378, 1971.

N3389 = Ho 212c. In background of M 96. Leo Group.
 Photo. Ap.J., 139, 284, 1964. Astrofizika, 3, 565, 1967. Sov. A.J., 13, 423, 1969.
 Ptm. Bull.A.A.S., 5, 348, 1973. A.J., 79, 835, 1974. Isodens. Ap.J.Suppl., 26, No.230, 1973.
 Spec. rot. P.A.S.P., 79, 322, 1967. A.&A., 8, 364, 1970.
 Dist. modulus. Astrofizika, 3, 571, 1967.
 HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
 SN1967C. IAU Cir. Nos. 2001, 2002, 2004, 1967. Ast. Tsirk. Nos. 408, 410, 432, 1967.
 Astrofizika, 3, 565, 1967. P.A.S.P., 79, 322, 1967. C.R.Acad. Sc., Paris, 265, 430, 1967.
 Bull.Abastumani Obs., No.37, 1969. Sov. A.J., 13, 423, 1969. Izv. Crimea Obs., 41-42, 367,
 1970. Ap.J., 182, 225, 1973.

A1046+26 = Haro 25 (Bol. Tonantzintla No.14, June 1956).
 Dim. A.J., 75, 1143, 1970.
 Ptm. Large disagree. in colors betw. sources DU and HI.
 HI 21 cm. A.&A., 29, 217, 1973.

A1046+52 = Mk 153. Dble system. Dim. incl. vF comp. 0'4s.

I2604 At 13' of interacting pair N3395-3396.

A1046+23 = Mk 417. Moderately broad lines.
 Spec. Ast. Tsirk. No.798, 1973. Astrofizika, 10, 315, 1974.

N3395, 3396 = Arp 270 = VV 246 = Ho 215a,b = K 249. P(b) at 2'.
 Photo. Ap.J., 160, 3, 1970.
 Spec., rot., mass. Ap.J., 160, 3, 1970.

N3404 = I2609.

N3400 In N3414-3418 group.

N3412 In Leo I Cloud. Ptm. 5 col.: A.J., 73, 313, 1968.

N3398 = I 644 = UGC 5954 = MCG 9-18-38. Brightest of three. I 646 (= MCG 9-18-39) misident. as N3398
 in RNGC 4'5 nrf. UGC 5976 (= MCG 9-18-41) misident. as N3398 in UGC and CGCG 13'2 nf.

I0651 m_p = 12.9 in CGCG, vol.I, 1960, and in MCG, vol.III, 1963.

N3414 = Arp 162. P. w. N3418 at 8'2. F diff. bar in halo.

N3413 = Ho 218c. P. w. N3424 at 9'9, N3430 at 15'.

N3418 P. w. N3414 at 8'2.

N3419A, 3419 Pair at 4'5.

N3424 = Ho 218a. P. w. N3413 at 9'9, N3430 at 6'2.

N3407 QSO, 4C 61.20 at 3'1 ($z = 0.422$).

N3430 = I2613 = Ho 218b. P. w. N3424 at 6'2, N3413 at 15'.
 Rot. vel. A.&A., 8, 364, 1970.

N3432 = Arp 206 = VV 11. Dwarf comp. close to sp end.
 Photo. Mem.S.A.Ital., 37, 433, 1966 = Cont. Asiago No.186. IAU Symp. 29, 97, 1968.
 A.&A., 29, 249, 1973.
 Ptm. Mem. S.A.Ital., 37, 433, 1966.
 Spec. rot., mass. Mem.S.A.Ital., 37, 433, 1966. IAU Symp. 29, 97, 1968. A.&A., 8, 364, 1970.
 Radio. A.&A., 29, 249, 1973.

A1050+50 = Mk 156. v close pair. The Mk gal. is obj. on p side.

N3447, 3447A = VV 252 = K 255. Pair in contact.

N3440, 3445 In a group.w. N3458.

N3445 = K 256a.

N3448 = Arp 205. P(b) w. F SB(s)dp 3'8 on p side. F extens. on f side.
 Descr. and Phys. data. Ap.J., 146, 593, 1966. A.J., 79, 1242, 1974.
 Photo. Ap.J., 146, 593, 1966.
 Dyn., mass. Bull.A.A.S., 1, 186, 1969.
 HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
 HI 21 cm. A.J., 79, 767, 1974.

N3454, 3455 = Ho 221b,a = K 257. Pair at 3'8.

N3458 In a group w. N3440, 3445.

A1055+72 = Mk 159 = K 258a. P. w. K 258b at 2' sf.
 Spec. blue cont.: Ap.J., 173, 7, 1972, but V given in Astrofizika, 6, 40, 357, 1970 (Poss. confusion
 w. K 258b?).

N3470 = K 259a.

N3471 = Mk 158. P. w. edge-on spir. at 2'4 nf.

N3489 Leo I Cloud.
 Ptm. 5 col.: A.J., 73, 313, 1968.

- N3486 Descr. and Photo. IAU Symp. 38, 435, 1970.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969; 194, 559, 1974.
Dist. modulus: Ap.J., 194, 559, 1974.
- A1059+45 = Mk 161. HI 21 cm. A.&A., 22, 281, 1973.
- N3504 P. w. N3512 at 12'. Bol.R.S.B2 1100+28.
Ptm. S, 10, 21u: Ap.J.Let., 176, L95, 1972. 7 col.: Izv. Spets. Ast. Obs., 6, 27, 1974.
Sptm. Ap.Let., 15, 35, 1973.
Dyn. mass. Ap.J., 184, 735, 1973.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
Radio. A.J., 73, 876, 1968.
- N3507 = K 263 b. $m_p = 11.4$ in CGCG, vol.II, 1963. * m \approx 11 superp.
- N3511 P(a) w. N3513 at 10'8.
- N3510 = Haro 26. (Bol. Tonantzintla No.14, June 1956).
Dim.: A.J., 75, 1143, 1970.
Ptm. A.J., 73, 882, 1968; 75, 1143, 1970.
Rot. vel. A.&A., 8, 564, 1970.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
HI 21 cm. A.&A., 29, 217, 1973.
- A1101+41 Mayall's nebula. = Arp 148 = VV 32. Ring gal.
Dim. of ring: Ap.J., 194, 569, 1974.
Photo. Ap.J., 140, 1617, 1964; 148, 321, 1967.
Spec. Ap.J., 140, 1617, 1964.
- N3513 P(a) w. N3511 at 10'8.
- N3512 P(a) w. N3504 at 12', N3515 at 13'5.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
- N3509 = Arp 335 = VV 75 = K 265. Strong asym. arm on f side.
- N3515 P(a) w. N3512 at 13'5.
- A1102+29 = Mk 36 = Haro 4 (Bol. Tonantzintla No.14, June 1956).
Descr., dim. A.J., 75, 1143, 1970. Ap.J., 173, 247, 1972.
Ptm. A.J., 75, 1143, 1970. Ap.J., 171, 5, 1972.
Spec., Sptm. Ap.J., 171, 5, 1972; 173, 247, 1972.
- N3517 = K 266.
- N3516 Class 1 Seyfert, $B_T = 14.0 - 16.0$, $B_T(\text{excl. N}) = 12.60$.
Diam. of N: A.J., 73, S175, 1968.
Photo. Nuclei of Galaxies, p.27, 1971. Pub. Dept. A, Univ. Texas, II, 2, No.7, 1968.
Ptm. A.J., 73, 858, 1968. U,B,V: A.J., 73, 866, 1958. Ap.Let., 1, 171, 1968; 12, 1, 1972.
Ast. Tsirk., No.620, 1971. Sov.A.J., 16, 763, 1973; 17, 169, 1973. M.N., 169, 357, 1974.
Att...Conv. Sci. Osserv. Cima Ekar, Padova-Asiago, p.101, 1973. = Cont. Asiago No.300b.
I.R.(1-10u): A.J., 73, 866, 1968. Ap.J.Let., 176, L95, 1972. M.N., 169, 357, 1974.
Spec. A.J., 73, 862, 897, 1968. Ap.Let., 1, 111, 1968; 8, 161, 1971; 13, 165, 1973. Ap.J., 174, 483, 1972. A.&A., 22, 343, 1973. Ast. Tsirk., No.688, 1972; No.831, 1974.
Sptm. Ast. Tsirk. No.467, 1968. Ap.J., 162, 743, 1970. Ann.Ap., 31, 569, 1968. Sov.A.J., 11, 767, 1968. A.&A., 1, 305, 1969; 27, 433, 1973. IAU Symp. 29, p.82, 1968. Nuclei of Galaxies, p.151, 1971.
Pol. Ast. Tsirk., No.454, 1967. Astrofizika, 7, 417, 1971; 8, 509, 1972.
Radio. A.&A., 15, 110, 1971.
- A1103+48 = Mk 163. Pec. Spir. at 1'2 nf.
- A1104+18A,B = Arp 191 = VV 239 = K 268. P(b) at 22". Long diff. tail on f side.
- N3533 Listed as N3557A in BGC and Mt.Stromlo (1956) survey.
- A1107+24A,B = Arp 301 = VV 229 = Ho 231a,b = K 271. P(b) at 0'8, connected.
- N3547 P(a) w. anon. SB(rs)O⁺ at 10'4.
Radio. A.J., 78, 18, 1973.
- N3557 In Klemola gr. No. 18 (A.J., 74, 804, 1969). P(a) w. N3564 at 7'5, N3568 at 11'5.
Radio. Proc. A.S. Aust., 2, 159, 1972.
- A1107+28A,B In Leo A Cl. (Abell 1185). Comp. B is blue knot n of E.
Descr., Photo., Spec. Ap.J., 173, 247, 1972.
- N3550 = K 274 Leo A Cl. Abell 1185. Dble system.
Diam. Ap.J., 173, 485, 1972.
Ptm. V. V-r: A.J., 75, 695, 1970.
- N3549 Sptm. Observ., 88, 239, 1968.
- N3564 P(a) w. N3557 at 7'5.
- N3558 = Mk 422. In Leo A Cl. Abell 1185.
- N3568 P(a) w. N3557 at 11'5.

- N3561A,B,C = Arp 105 = VV 237. Zwicky 1971. Listed in BGC as A1108A,B,C. In Leo A Cl. Abell 1185. Multiple connected system. From N to S: comp. A = NGC 3561 is the spir., comp. B the lentic. and comp. C (Ambarzumian's knot) the blue compact w. $V_0 = 8840 \pm 53$ (Sources K, S6). Long diffuse tail extending to the n.
Descr., dim. Ap.J., 143, 192, 1966; Ap.J.Let., 155, L141, 1969; Ap.J., 173, 247, 1972.
Photo. A.J., 73, 887, 1968. Ap.J., 173, 247, 1972. IAU Symp. 44, p.381, 1972.
Spec. A.J., 73, 887, 1968. Ap.J., 173, 247, 1972.
Sptm. Bull.A.A.S., 1, 262, 1969. Ap.J., 173, 247, 1972.
SN1953a (in Comp. A) P.A.S.P., 78, 471, 1966.
- N3556 Photo. Mem.S.A.Ital., 43, 145, 1971 = Cont.Asiago No.254. A.&A., 29, 249, 1973.
Rot. vel. A.&A., 8, 364, 1970.
SN1969b. IAU Cir. Nos.2131, 2134, 1969. Ast. Tsirk. No.494, 1969. Mem.S.A.Ital., 42, 145, 1971 = Cont. Asiago, No.254.
HI 21 cm. Ap.J., 150, 8, 1967.
Radio. A.&A., 29, 249, 1973.
- N3563 = K 277.
- N3571 = N3544.
- N3570 SN1973d. and Photo. P.A.S.P., 86, 516, 1974.
- N3574 SN1973a and Photo. P.A.S.P., 86, 516, 1974.
- A1110+22 = DDO 93. Leo II system. E. dwarf in Local Group.
Struct., Phys. data. A.J., 74, 587, 1969. Ann. Rev. Ast. & Ap., 9, 35, 1971.
Ptm. var. *: P.A.S.P., 79, 439, 1967. A.J., 73, S205, 1968.
Dyn., mass. Ap.J., 144, 868, 1966.
- N3577 P(a) w. N3583 at 5'0, and sF anon. SB(s)m at 2'7.
- N3583 = 5C 2.203. Small E0 satellite at 0'9 nf. P. w. N3577 at 5'0.
Radio. M.N., 139, 529, 1968. Poss. SN rem.?: IAU Symp. 44, p.82, 1972.
- N3593 In N3627 = M66 group. Photo. Ap.J., 157, 75, 1969.
Spec., rot., mass. Ap.J., 157, 75, 1969.
Radio. Aust. J. Phys., 19, 565, 1966.
- N3596 HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
- N3599 In N3607 group.
- N3600 $m_p = 12.6$ in CGCG, vol.III, 1966. $m_p = 13$ in MCG, vol.II, 1964.
- A1113+29A In Leo B Cl. (Abell 1213). Mag. and color reduced w. dim on PSS (0'55 x 0'40)
Diam. Ap.J., 173, 485, 1972.
Ptm. V, V-r: A.J., 75, 695, 1970.
- N3605 = Ho 240c. In N3607 group. P(a) w. N3607 at 2'7.
Ptm. Ap.J., 139, 284, 1964. 10 col.: Ap.J., 179, 731, 1973.
Dyn., mass. Ap.J., 139, 284, 1964.
- N3607 = Ho 240a = K 278a. Brightest of a group. P(a) w. N3605 at 2'7, N3608 at 5'8.
Radio. Ap.J., 157, 481, 1969.
- N3608 = Ho 240b = K 278b. In N3607 group. P(a) w. N3607 at 5'8.
Ptm. Ap.J., 139, 284, 1964. 10 col.: Ap.J., 179, 731, 1973.
Dyn., mass. Ap.J., 139, 284, 1964.
- N3611 2 F anon. SB(s)m at 3'0 and 10'0.
- N3614A, 3614 Pair at 2'5.
- A1115+28 SN1966k. A.N., 290, 135, 1967. P.A.S.P., 79, 456, 1967 (w. Photo.)
SN1971a. IAU Cir. No.2306, 1971. Ast. Tsirk. No.608, 1971. P.A.S.P., 84, 844, 1972 (w. Photo.)
- N3613 P(a) w. N3619 at 16'.
Ptm. 10 col.: Ap.J., 179, 731, 1973.
- N3623 = M 65 = Arp 317 = Ho 246b. P(a) w. N3627 at 20' (Leo Group).
Photo. A.J., 79, 671, 1974.
Ptm. 5 col.: A.J., 73, 313, 1968. Isodens. A.J., 79, 671, 1974.
Sptm. A.&A., 27, 433, 1973.
HII reg. Bull.A.A.S., 6, 343, 1974.
- N3619 P(a) w. N3625 at 9'5.
- A1116+51 Blue dble compact. Descr., Photo., Spec. Ap.J., 142, 402, 1965.
HI 21 cm. up. limit: A.&A., 8, 424, 1970.
- A1116-02 Ident. w. 3C 255, or PKS 1116-02 has been rej., ; see Ap.J., 191, 43, 1974.
- N3626 = N3622.

- N3627 = M 66 = Arp 16 & 317 = Ho 246a. P(a) w. N3623 at 20' (Leo Group).
Photo. A.J., 79, 671, 1974.
Ptm. 5 col.: A.J., 73, 313, 1968. Isodens. A.J., 79, 671, 1974. 10u: Ap.J.Let., 176, L95, 1972.
Sptm. A.&A., 27, 433, 1973.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J.Suppl., 27, No.239, 1974.
SN1974. IAU Cir. Nos. 2615, 2624, 1974.
- N3625 P(a) w. N3619 at 9'5.
- N3628 = Arp 317 = VV 308 = Ho 246c. In M66 group. vF extens.
Photo. Mem. S.A.Ital., 44, 359, 1973. A.J., 79, 671, 1974.
Ptm. Mem.S.A.Ital., 44, 359, 1973. Isodens. A.J., 79, 671, 1974.
Rot. vel. A.&A., 8, 364, 1970.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
Radio. Aust. J. Phys., 19, 565, 1966. Ap.J., 150, 413, 1967. M.N., 167, 251, 1974.
- N3630, 3633 In N3630-3645 group.
- N3629 = Ho 247a. (Ho 247b at 3'5 is a *).
- N3636 vB * at 1'7. P(a) w. N3637 at 3'8.
- N3637 P(a) w. N3636 at 3'8.
- N3631 = Arp 37.
Photo. Astrofizika, 6, 367, 1970. Mem.S.A.Ital., 42, 145, 1972 = Cont. Asiago No.254.
Ptm. Astrofizika, 6, 367, 1970.
Sptm. Observ., 88, 239, 1968.
HII reg. and Dist. modulus. Ap.J., 194, 559, 1974.
SN1964a. Inf. Bull. Var. S. No.113, 1965.
SN1965e. IAU Cir. No.1930, 1965. Ast. Tsirk. No.349, 1965. Inf. Bull.V.S., No.113, 1965.
Mem.S.A.Ital., 42, 145, 1971 = Cont. Asiago No.254.
- N3640, 3641 Pair at 2'5. In N3630-3645 group.
- I2738 In cent. part of cl. Abell 1228. P. w. I2735, 2744, 2751.
Diam. Ap.J., 173, 485, 1972.
Ptm. V, V-r: A.J., 75, 695, 1970.
- N3643 In N3630-3645 group. Note corr. to coord. in A.&A.Suppl., 3, 325, 1971 (which are for N3645).
- N3646, 3649 = K 281. Pair at 7'8.
- N3652 m_p = 12.6 in CGCG, vol. III, 1966. m_p = 13. in MCG, vol.II, 1964.
- N3656 = Arp 155 = VV 22 = K 282. Pec dk lane, diff. arm and patch 0'7 s.
Photo. Ann.Ap., 27, 300, 1964. Coll. Int. Novae & SN, CNRS, Paris, p.178, 1965.
Astrofizika, 9, 450, 1973. P.A.S.P., 86, 516, 1974.
Ptm. Pub. Erevan, 34, 31, 1963.
Sptm. Observ., 88, 239, 1968.
SN1963k. IAU Cir.No.1831, 1834, 1963. Ast. Tsirk. No.250, 1963.
SN1973c. IAU Cir. Nos.2491, 2507, 1973. Ast.Tsirk. No.768, 1973. Astrofizika, 9, 450, 1973.
P.A.S.P., 86, 516, 1974.
- N3660 m_p = 12.5 in MCG, vol.III, 1963.
- N3658 P(a) w. N3665 at 15'.
- N3664, 3664A P(b) at 6'2. N3664 = Arp 5 = VV 251 = DDO 95 = K 283.
- N3665 P(a) w. N3658 at 15'.
- N3672 P(a) w. anon. SAO⁺ at 13'5 nnf; and I0688 at 20' p.
- All122+54 = Mk 40 = I Zw 26 = Arp 151 = VV 144. Elong. compact w. diff. jet extending 40" n and knot 20" from nucl. B* 1'5 n. Class 1 Seyfert.
Photo. Ap.J., 140, 1307, 1964. Galileo Conf. on Cosmology, p.134, 1966.
Spec. Ap.J., 140, 1307, 1964. A.J., 73, 890, 893, 1968. Nuclei of Galaxies, p.351, 1971.
Sptm. IAU Symp. 44, p.143, 1972.
- N3675 Ptm. I.R. 2 - 20u: Ap.J.Let., 159, L165, 1970; 161, L203, 1970; 176, L95, 1972.
- All123-35 = PKS. Prob. E w. absorpt. spec.
- All123+03 SN1955g and Photo. P.A.S.P., 85, 427, 1973.
- N3677 = K 284a.
- N3674 P(a) w. N3683 at 13'5 and F anon. SB(r)O⁺ at 7'9.
- I0691 = Mk 169. Noted as compact w. halo + jet in CGCG, vol.IV, 1968.
Ptm., Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972.
- N3681 P(a) w. N3684 at 14'.
- All124+35 = Mk 423. Weak Seyfert. Spec. Ast. Tsirk., No.798, 1973. Astrofizika, 10, 315, 1974.
- N3684 P(a) w. N3681 at 14' sp, N3686 at 14' nf.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.

A1124+79 = VII Zw 403. Multiple system of blue compacts.
Spec. A.&A., 30, 21, 1974.
HI 21 cm. confused by local HI cld.: A.&A., 30, 21, 1974.

N3683 P(a) w. N3674 at 13'5.

N3686 P. w. N3684 at 14'.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969.

N3691 HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.

N3689 = 4C 25.35. PKS 1125+26.
Radio. A.&A., 31, 447, 1974.

N3690, I0694 = Mk 171 = Arp 299 = VV 118 = K 288. Note corr. to Arp Atlas No. Coll. pair P(c) and F compact 50" NW, at same redshift (M.N., 153, 383, 1971. Ap.J., 173, 7, 1972).
Ptm. U,B,V: Source N, log A = 1.03, V = 11.85, B-V = 0.56, U-B = -0.34 for both. Ap.J., 171, 5, 1972.
S, 10μ: Ap.J. Let., 176, 195, 1972.
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972.

N3692 m_p = 12.9 in CGCG, vol.I, 1960, and MCG, vol.III, 1963.

N3683A P(a) w. N3683 at 20'.

A1127+24 Blue irr. gal. previously catalogued as var.* AU Leo.
Descr., mag., spec., P.A.S.P., 86, 668, 1974.

A1127+58 Low s.b.dwarf.

N3705 = Ho 259a. P. w. Ho 259b,c at 8'6 and 7'5.

I0701 = Arp 197 = VV 3. F filament extend. 40" NW at end of bar connecting w. diff. patch.
Photo. and Spec. Ap.J., 148, 321, 1967.

N3717 P. w. I2913 at 7'5. Note corr. to NGC Dec.

A1129+71A,B,C,D,E = Arp 329 = VV 172 = VII Zw 407. Chain of 5 diff. obj. A to E extends 0'9, from N to S. Excess redshift of comp. B, a compact 10" s of A, $V_0 = 37062 \pm 105$, Source K3.
Photo., Spec. Ap.J. Let. 153, L135, 1968. Vel. of Source F assumed for comp. C and E w. $\Delta V = 170 \text{ km s}^{-1}$
Ptm. U,B,V,R: Ap.J., 183, 711, 1973.

A1129+62 = Mk 175. 2 f comp. at 3'2 and 4'9 ssf.

N3719, 3720 = Ho 260b,a = K 289. Pair at 2'3.

A1129+53A,B,C,D,E = Arp 322 = VV 150 = I Zw 27. Comp. D = Mk 176. Chain (7' s of N3718) of four connected gal. + fifth gal. $\sim 1'$ f (not shown on Arp Atlas). The Mk gal. is distorted and has a class 2 Seyfert N.
Photo. Ap.J., 185, 797, 1973. A.&A., 28, 379, 1973.
Spec. A.J., 73, 890, 1968. Ap.J., 160, 405, 1970; 185, 797, 1973; 192, 581, 1974.
 Mean vel. of five comp.: Ap.J., 173, 7, 1972. Nuclei of Galaxies, p.351, 1971.
Radio. A.&A., 28, 379, 1973. Nature, 241, 260, 1973.

N3718 = Arp 214 = K 290a. P(b) w. N3729 at 11'5. Pec. chain A1129+53A to E at 7' s.
Photo. Ap.J., 185, 797, 1973. A.&A., 28, 379, 1973.
Sptm. Observ., 88, 239, 1968.
HI 21 cm. A.J., 79, 767, 1974.
Radio A.&A., 28, 379, 1973.

N3726 Photo. A.&A., 15, 110, 1971.
HII reg., Dist. modulus. Ap.J., 194, 559, 1974.
Radio. A.&A., 15, 110, 1971.

A1130+49 = Mk 178. Dwarf late-type spir.
Ptm., Sptm. Ap.J., 171, 5, 1972.
HI 21 cm. A.&A., 22, 281, 1973.

N3729 = K 290b. P(b) w. N3718 at 11'5.

N3732 = N3730. Brightest in a group incl. N3723, N3763.

I0712 In Abell 1314 (I0709, 711, 2 R.S.: P.A.S.P., 86, 223, 1974)
Diam. Ap.J., 173, 485, 1972.
Ptm. V, V-r: A.J., 75, 695, 1970.

N3733 P. w. N3737 at 8'3. In Abell 1318?

N3737 = Ho 266a. P. w. anon. (Ho 266b) at 1'2, N3733 at 8'3. In foreground of Abell 1318 (See A.J., 79, 1356, 1974)
Ptm. V, V-r: A.J., 75, 695, 1970.

N3738 = Arp 234. P(a) w. N3756 at 16'.
Sptm. Observ., 88, 239, 1968.

A1133+20 SN1966d and Photo. P.A.S.P., 79, 456, 1967. A.N., 290, 135, 1967.

I2943 = Mk 41. P(a) w. N3759 at 2'1.
Spec. Prev. reported as blue cont., no lines (Astrofizika, 5, 113, 1969)

N3756 P(a) w. N3738 at 16'.
Sptm. Observ., 88, 239, 1968.

N3759 P. w. I2943 = Mk 41 at 2'1.

A1134+20A = Mk 181. Pair w. Mk 182 at 2'7s ($V_0 = 6156 \pm 100$, Source Z2).

N3764B = II Zw 52. Close pair of compact (comp. B) and Sc pec. (comp. A).

N3769 = Arp 280 = Ho 270a = K 294a. P(b) w. N3769A at 1'2.

N3745, 3746 Pair at 0'7, part of Copeland Septet = Arp 320 = VV 282 (w. N3748, 3750, 3751, 3753, 3754).
 Note corr. to NGC coord. in DII. N3745 = MCG 4-28-4; N3746 = MCG 4-28-5 = UGC 6597.
Ptm., and Spec. Nuclei of Galaxies, p. 351, 1971 (Obj. B,C).

N3769A = Arp 280 = Ho 270b = K 294b. P(b) w. N3769 at 1'2.

N3748, 3750, 3751, 3753, 3754. In Copeland Septet = Arp 320 = VV 282 (w. N3745, 3746).
 Note corr. to NGC coord. in DII. N3748 = MCG 4-28-7; N3750 = MCG 4-28-8; N3751 = MCG 4-28-9 = UGC 6601
 (note corr. to UGC coord.); N3753 = MCG 4-28-10 = UGC 6602; N3754 = MCG 4-28-11.
Ptm. and Spec. Nuclei of Galaxies, p. 351, 1971 (Obj. A,G,H,F,E).

N3783 Class 1 Seyfert N.
Photo. Ap.J., 189, 187, 1974. M.N., 168, 109, 1974.
Ptm. Rosario Ast. Obs. Bol., No.2, 5, 1972. U.B.V. Bol.A.A.Argentina, No.16, 22, 1971.
 Ap.J., 189, 187, 1974. I.R. 1-10 μ : M.N., 164, 155, 1973. Ap.J.Let., 191, L19, 1974.
Spec. A.J., 72, 821, 1967. Bull.A.A.S., 1, 256, 1969. Ap.J., 189, 187, 1974.
Sptm. Ap.J., 189, 187, 1974. M.N., 168, 109, 1974.

N3780 P(a) w. N3804 at 13'5.

N3786, 3788 = Arp 294 = VV 228 = Ho 272b,a = K 295. P(b) at 1'5.

A1137+46 SN1975? IAU Cir. No. 2760, 1975.

N3799, 3800 = Arp 83 = VV 350 = K 296. P(b) at 1'2.

N3801, 3802 Pair at 2'3. N3801 = 4C 17.52.

A1137+28 = Haro 27. (Bol. Tonantzintla No.14, June 1956).
Diam., Spec. P.A.S.P., 80, 29, 1968.
Ptm. P.A.S.P., 80, 29, 1968. A.J., 73, 882, 1968.

N3800, 3800A = Arp 87 = VV 300 = K 277. P(b) at 1'. Connected.
Photo., Spec. A.&A., 3, 418, 1969.

N3804 = N3794. P(a) w. N3780 at 13'5.

N3810 Photo. Ap.J., 194, 559, 1974.
Spec. Ap.J., 190, 509, 1974.
HII reg., Dist. modulus: Ap.J., 194, 559, 1974.

N3811 = Mk 185.
SN1969c. IAU Cir. No.2134, 1969. Ast. Tsirk. No.494, 1969. Ap.J., 185, 303, 1969.
SN1971K. IAU Cir. No.2335, 1971. Ast. Tsirk. No.630, 1971. Yamamoto Cir. No.1739, 1971.
 Mem. S.A. Ital., 42, 67, 1971.

N3818 P(a) w. anon. Pec. at 21'.

N3834 SN1968f. IAU Cir. No.2072, 1968. P.A.S.P., 81, 224, 1969 (w. Photo.)

N3842 In Abell 1367.
Ptm., Spec. A.J., 75, 695, 1970. (redshift is mean for gal. and its comp. = N3841 at 2'9).

N3846A = VV 320a. In N3846-3898 group.

N3846 In N3846-3898 group.

N3865 = N3854. Note corr. to NGC coord.

N3862 = 3C 264 = 4C 19.40. In Abell 1367.
Descr. Ap.J., 140, 35, 1964. P.A.S.P., 80, 129, 1968.
Ptm. U.B.V.R: Ap.J., 178, 25, 1972; 183, 731, 1973.
Radio. Ap.J., 142, 106, 1965. A.J., 72, 230, 1967; 73, 1, 1968. A.&A., 34, 341, 1974.
X-rays (in Abell 1367) Ap.J.Let., 185, L13, 1973; 193, L57, 1974.

A1142+59 = VII Zw 421. Prob. L w. absorp. spec.
Spec. A.&A., 33, 113, 1974.

N3850 In N3846-3898 group. Note corr. to NGC R.A.

N3870 = Mk 186. HI 21 cm. A.&A., 22, 281, 1973.

N3877 * superp. on N. Spec. Ap.J., 194, 223, 1974.

A1144-03A,B,C = Arp 248 = VV 35. Wild's connected triplet. F S sp. 0'8 f comp. A, prob. in background.

N3888 = Mk 188. P(a) w. N3898 at 16'. In N3846-3898 group.
Radio. A.&A., 15, 110, 1971.

N3893 = Ho 293a = K 302a. P.w. N3896 at 3'9.
 N3894 = Ho 294a = K 303a. P(a) w. N3895 at 2'0.
Radio. Ap.J., 189, 399, 1974.
 N3896 = Ho 293b = K 302b. P. w. N3893 at 3'9.
 N3895 = Ho 294b = K 303b. P(a) w. N3894 at 2'0.
 N3898 Brightest of N3846-3898 group. P(a) w. N3888 at 16'.
 N3904 P(a) w. N3923 at 37'.
SN1971c. IAU Cir. Nos.2305, 2309, 1971. Ast. Tsirk. No.607, 1971.
 N3912 = N3899.
 N3913 = I 740 = Ho 296a. (Ho 296b at 1'7, not found); P(b?) w. N3921 at 17'. Note corr. to NGC coord.
Photo. Ann. Ap., 27, 300, 1964. Coll. Int. Novae & SN, CNRS, Paris, p.178, 1965.
P.A.S.P., 76, 325, 1964.
Spec. Ap.J., 194, 223, 1974. P.A.S.P., 86, 516, 1974.
SN1963j. P.A.S.P., 76, 325, 1964. Ann. Ap., 27, 300, 1964. Mem.S.A.Ital., 35, 129, 1964; 36, 299, 1965 (= Cont. Asiago No.182).
 N3917 P(a) w. N3931 at 11', and anon. Ssp at 6' np. Other anon. E at 9'n and 4'5 f.
 N3916 P. w. N3921 at 4'5.
SN1974. IAU Cir. No.2653, 1974.
 N3921 = Mk 430 = I Zw 28 = Arp 224 = VV 31. P. w. N3916 at 4'5. P(b?) w. N3913 at 17'.
 Long filaments emerging n and s.
 N3923 P(a) w. N3904 at 37'.
HI 21 cm. up. limit: A.&A., 25, 451, 1973.
 A1148+43 = II Zw 54, No.1 = III Zw 63. $m_p = 17.8$. Close pair of compacts at 11".
 N3931 P(a) w. N3917 at 11'.
 N3930 = Ho 300a. P. w. Ho 300b at 3'3.
 N3928 = Mk 190. N3932 at 5'5 sf is a*.
 A1149+46 = I Zw 29. $m_p = 15.8$. Spec. M.N., 153, 383, 1971.
 N3938 Photo. Cont. Asiago No.174, 1965. Ap.J., 194, 559, 1974.
HI reg., Dist. modulus: Ap.J., 194, 559, 1974.
SN1961u. "Stellar Structure", vol.VIII of Stars and Stellar Systems, pp.396, 402, 1965.
SN1964k. IAU Cir. No.1882, 1964. Bull.S.Ast. France, 79, 133, 1965. Cont. Asiago No. 174, 1965.
 A1150+70 = Mk 191 = VII Zw 426. S w. compact core and F extended arms. $m_p = 15.3$.
 N3947 SN1972c. and Photo. P.A.S.P., 85, 427, 1973.
 N3949 = Ho 301a. N3950 (Ho 301b) type EO: at 1'6 n. Another comp. 4'4 p.
 A1151+46 = Mk 42. Class 1 Seyfert N.
Ptm. 8 col.: Izv. Crimean Ast. Obs., 52, 65, 1974.
Spec. IAU Symp. 44, p.160, 1972.
Sptm. Ast. Tsirk. No.502, 1969; No.800, 1974. Astrofizika, 7, 389, 1971. IAU Symp.44, p.160, 1972.
Radio. A.J., 77, 705, 1972.
 N3953 Sptm. Observ., 88, 239, 1968.
 A1151+09 Ident. w. 4C 09.40 has been rej.
 N3955 Descr. and Phys. data: Astrofizika, 2, 53, 1966. A.J., 79, 1242, 1974.
Photo. Ap.J., 146, 593, 1966. Astrofizika, 2, 53, 1966.
Ptm. A.J., 74, 335, 1969. Bull.A.A.S., 5, 549, 1973.
Spec. and Sptm. A.&A., 31, 165, 1974.
 N3958, 3963 Pair at 8'2.
 N3968 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
 A1152+55A,B Pair at 2'. Comp. A = 4C 55.22.
 N3972 = Ho 304a. P(a) w. N3977 (Ho 304b) at 5'2.
 N3975 = Ho 306b. P. w. N3978 at 2'0.
 N3976 = Ho 305a. P. w. Ho 305b at 4'8.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
 N3981 = Arp 289 = VV 8. F outer arms.
 N3977 = 3980 = Ho 304b. P(a) w. N3972 at 5'2.
SN1946a. Z.f.Ap., 49, 202, 1961.

N3978 = Ho 306a. P. w. N3975 at 2'0.
 N3982 Sptm. Observ., 88, 239, 1968.
 N3985 = K 310.
 N3986 P. w. I2978 at 4'8.
 N3991 = Arp 313 = Ho 309c = K 311 = Haro 5 (Bol. Tonantzintla, No.14, June 1956).
 In multiple interacting system w. N3994-95.
Ptm. A.J., 73, 882, 1968; 75, 1143, 1970.
Radio. Nature, 219, 1032, 1968.
 N3992 Photo. A.J., 69, 759, 1964.
Ptm. Bull. Inst. Ap. Duschambe, No. 41, 65, 1966.
Sptm. Observ., 88, 239, 1968.
SN1956a. A.J., 69, 759, 1964.
 N3990 = Ho 310b. P(a) w. N3998 (Ho 310a) at 3'2.
 N3994 = Arp 313 = VV 249 = Ho 309b. In multiple interacting system w. N3991-3995.
 N3993 = Ho 308a. In multiple system w. N3987, 89, 97.
 N3995 = Arp 313 = VV 249 = Ho 309a. In multiple interacting system w. N3991-3994.
 N3997 = Ho 308b. In multiple system w. N3987, 89, 93.
 N3998 = Ho 310a. P(a) w. N3990 at 3'2.
Spec. Ap.J., 142, 634, 1965; Ap.J.Let., 160, L79, 1970; 164, L35, 1971.
Sptm. Observ., 88, 239, 1968. Ap.J.Let., 193, L49, 1974.
Rot. vel. Ap.J.Let., 160, L79, 1970. A.&A., 8, 364, 1970.
Radio. Ap.J., 157, 481, 1969. A.J., 75, 523, 1970. IAU Symp. 44, p.222, 1972.
 N4004 = Mk 432 = VV 230. Very pec. and asym. P. w. I2982 at 3'2.
 A1155-14A = DDO 104 = UGC A0256
 A1155-14B = DDO 103 = UGC A0258
 A1155+38 = DDO 105. Listed in BGC as A1157. Note corr. coord.
 I0749 = Ho 313a = K 313a. Pair w. I0750 (Ho 313b) at 3'3.
 N4010 = Ho 314a. P. w. N4001 (Ho 314b) at 7'.
 I0750 = Ho 313b = K 313b. Pair w. I0749 at 3'3.
 I0751 Pair w. I0752 at 4'2.
 A1156+52 SN1964e. Harvard Cir. No.1640, 1964. IAU Cir. Nos.1856, 1858, 1964. Ast. Tsirk. Nos.288, 291, 301, 1964. Inf. Bull.V.S., Nos.50, 53, 56, 1964. Tokyo Ast. Bull.No.176, 1967. Ivz.Ast.Obs. Kazan, No.36, 268, 1968.
 N4027 = Arp 22 = VV 66. P(b) w. dwarf Im comp. N4027A at 3'7 s. P(a) w. N4038-39 at 41'.
Photo. M.N., 139, 425, 1968. Vistas in Ast., vol.14, p.200, 1972.
Ptm., Spec., Dyn. M.N., 139, 425, 1968. Vistas in Ast., vol.14, p.231, 239, 1972.
 N4030 F anon. Im at 16'5 sf.
 N4035 Note corr. to NGC R.A.
 N4032 = N4042?
 I0755 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
 N4036 P(a) w. N4041 at 15'.
 N4038+39 = Arp 244 = VV 245. Coll. system w. long streamers. P(a) w. N4027 at 41'.
Photo. Ap.J., 145, 661, 1966; 160, 801, 1970. IAU Symp. 29, p.414, 1968.
Astrofizika, 6, 367, 1970. A.&A., 28, 379, 1973.
Ptm. Astrofizika, 6, 367, 1970.
Spec., vel. field, Ap.J., 145, 661, 1966; 160, 801, 1970.
Dyn., encounter model: Ap.J., 178, 623, 1972. IAU Symp. 58, 358, 1974.
SN1974. IAU Cir. Nos.2653, 2663, 2664, 1974.
HI 21 cm. A.J., 79, 767, 1974.
Radio. Aust. J. Phys., 21, 193, 1968. M.N., 159, 15P, 1972; 167, 251, 1974.
 Ap.J., 183, 791, 1973. A.&A., 28, 379, 1973. Nature, 241, 260, 1973.
 N4041 P(a) w. N4036 at 15'. 2 F anon. SB(s)m at 12' and 17'.
 A1200+64 = Mk 195. Ptm. Ap.J., 171, 5, 1972.
Sptm. Astrofizika, 7, 389, 1970. Ap.J., 171, 5, 1972.
 N4045, 4045A = Ho 320a,b. Pair 1'6.
 N4050 Ptm., mass. Sov.A.J., 10, 34, 1966.

N4051 Class 1 Seyfert N. $B_T = 14.60$, $B_T(\text{excl. N}) = 10.99$.
Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967. Nuclei of Galaxies, p.27, 1971.
Diam. of N: A.J., 73, S175, 1968.
Photo. Pub. Dept. A. Univ. Texas, II, 2, No.7, 1968. Nuclei of Galaxies, p.27, 1971,
 Sov. A.J., 17, 643, 1971.
Ptm. A.J., 73, 858, 1968. Pub. Dept. A. Univ. Texas, II, 2, No.7, 1968. 12 col.: Ap.J., 145, 36, 1966.
 U.B.V.: Ap.J.Let., 150, L177, 1967. A.J., 73, 866, 1968. Sov.A.J., 17, 169, 1973.
 M.N., 167, 1P, 1974; 169, 357, 1974. Atti...Conv.Sci.Osserv. Cima Ekar, Padova-Asiago, p.101,
 1973 = Cont.Asiago, No.300b. Isoph.: Sov.A.J., 17, 643, 1974. I.R. 1-10 μ : A.J., 73, 866, 870,
 1968. Ap.J.Let., 176, L95, 1972. M.N., 169, 357, 1974. Nuclei of Galaxies, p.195, 1971.
Spec. Ap.J., 192, 581, 1974.
Sptm. Ap.J.Let., 154, L53, 1968; Ap.J., 162, 743, 1970; 164, 1, 1971. Sov.A.J., 11, 767, 1967.
 Ast. Tsirk., No.467, 1968. IAU Symp. 29, p.83, 1968. C.R.Acad. Sc., B, 270, 238, 1970.
 A.&A., 27, 433, 1973. Nuclei of Galaxies, p.151, 1971.
 Pol. Ast. Tsirk. No.454, 1967. Astrofizika, 4, 409, 1968; 7, 417, 1971.
 HI 21 cm. A.&A., 10, 198, 1971. IAU Symp. 44, p.267, 1972.
Radio. A.J., 73, 876, 1968. A.&A., 15, 110, 1971.

A1200+16 SN1961k and Photo. P.A.S.P., 74, 215, 1962.

A1202+01 SN1955f and Photo. P.A.S.P., 84, 844, 1972.

N4061, 4065 = VV 179. Pair at 1'.
Radio. M.N., 167, 251, 1974.

I0758 Replaces I0757 (a Dble *) w. corr. coord.

N4073 In a group.w. N4077 and other F gal.

A1202+18A,B = K 318. Pair at 3'.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4085 = Ho 326b. P(a) w. N4088 at 11'.

N4088 = Arp 18 = Ho 326a. P(a) w. N4085 at 11'. F extends. to arm on p side.
Photo. Izv. Crimea Obs., 45, 162, 1972.
Ptm. 7 col.: Izv. Crimea Obs., 45, 162, 1972. IAU Symp. 44, 62, 1972.
Rot. vel. A.&A., 8, 364, 1970.

A1203+09 = K 319b. Comp.(= K 319a). at 1'5 p. Connected by bridge.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

A1203+31A,B = Arp 97 = VV 13. Connected pair at 1'2. Comp. B has diff. curved extends. to the s.

N4108A at 8' np N4108.

N4096 SN1960h. Ap.J., 182, 225, 1973.

N4102 SN1975. IAU Cir. Nos. 2776, 2782, 1975.
Radio. A.J., 75, 523, 1970.

N4105, 4106 P(b) at 1'15.

N4109 = Ho 333b. P. w. N4111 at 4'8.

N4111 = Ho 333a. P. w. N4109 at 4'8.
Ptm. Atti...Conv. Sci. Osserv. Cima Ekar, Padova-Asiago, p.101, 1973 = Cont. Asiago No.300b.
Spec., vel. disp. IAU Symp. 15, p.112, 1962.
Rot., mass. A.&A., 8, 364, 1970. Cont. Asiago Obs. No.300bis, p.101, 1973.

A1204+17 SN1960c and Photo. P.A.S.P., 73, 175, 1961.

N4108B = VII Zw 439. At 5' nf N4108.

N4116 = K 322a. P(a) w. N4123 at 14'.
Rot. vel.: A.&A., 8, 364, 1970.

N4117, 4118 = Ho 334a,b. Pair at 1'6.

N4121 = Ho 335b. P. w. N4125 at 3'6.

N4125 = Ho 335a. P. w. N4121 at 3'6.
Photo. Comm. Padova, No.98, 1972.
Spec. rot. Comm. Padova, No.98, 1972.
 HI 21 cm. up. limit: A.J., 77, 568, 1972.

N4123 = K 322b. P(a) w. N4116 at 14'.

N4127 $m_p = 12$ in MCG, vol.I, 1962. $m_p = 13.5$ in CGCG, vol.IV, 1968.

N4128 = Ho 337a. P. w. Ho 337b at 2'.

N4131 Brightest of group.

N4129 SN1954aa and Photo. P.A.S.P., 86, 516, 1974.

A1206+47 = Mk 198. Class 2 Seyfert N.
Spec. Ap.J., 192, 581, 1974.
Radio. V.U.Z. Radiofizika, 16, 1342, 1973.

- N4136 SN1941c. IAU Cir. No.866, 1941. Z.f.Ap., 49, 202, 1961.
- N4138 QSO 3C 268.4 at 2'9 (z = 1.400). Photo. Ap.J., 170, 233, 1971.
- A1207+17 = II Zw 57. Spec. M.N., 153, 383, 1971.
- N4144 HI 21 cm. Discordant Source R2 (A.&A., 3, 292, 1969) rejected.
- N4145 = Ho 342a = K 324a. P. w. A1208+40 = Ho 342b at 13'.
Photo., Ptm. Astrofizika, 10, 493, 1974.
- N4146 SN1963d. Comm. Padova, No.31, 1963. Mem.S.A.Ital., 36, 299, 1965 = Cont. Asiago No.182 (w. Photo.)
- N4151 = Ho 345a = K324b. P(a) w. N4156 at 5'2 and Ho 345c at 8'8. Class 1 Seyfert N.
B_N = 12.4-13.4, B_T(excl.N) = 11.28.
Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967.
Dim. of N: A.J., 73, S173, S175, 1968. Ap.J.Let., 154, L117, 1968; Ap.J., 182, 357, 1973.
Bull.A.A.S., 3, 243, 1971.
Photo. Pub.Dept.A. Univ. Texas, II, 2, No.7, 1968. Ap.J., 153, 27, 1968. Ap.Let., 4, 117, 1969.
Nuclei of Galaxies, p.27, 1971. Astrofizika, 10, 473, 1974.
Ptm. U.B.V: Ap.J.Let., 150, L67, L177, 1967. Ap.J., 163, 449, 1971. A.J., 73, S13, 850, 854, 858, 866, 1968. Ap.Let., 1, 171, 1968. Pub.Dept.A.Univ. Texas, II, 2, No.7, 1968.
M.N., 152, 79, 1971; 153, 29, 1971; 169, 357, 1974. Sov.A.J., 13, 184, 1969; 16, 769, 1973; 17, 169, 1973. Ast. Tsirk. No.470, 1968; No.544, 1970; No.620, 1971. Bull.A.A.S., 3, 238, 1971. IAU Symp. 44, p.165, 1972. Astrofizika, 10, 493, 1974. Att...Conv. Sci. Osserv. Cima Ekar, Padova-Asiago, p.101, 1973 = Cont. Asiago No.300b.
I.R. 1-350u: Ap.J. Let., 159, L165, 1970; 161, L203, 1970; 176, L95, 1972; 177, L21, L115, 1972. Ap.J., 163, 449, 1971; 187, 213, 1974. A.J., 73, 866, 868, 870, 1968. Nature, 224, 675, 1969. Nature, Phys. Sc., 233, 16, 1971. M.N., 153, 29, 1971; 169, 357, 1974. Bull.A.A.S., 3, 238, 1971; 5, 396, 1973.
Spec. Ap.J., 151, 807, 1968; 158, 859, 1969; 159, 405, 1970; 169, 449, 1971; 181, 51, 1973; 189, 195, 1974. Ap.J.Let., 152, L113, 1968; 153, L39, 1968; 159, L147, 1970; 165, L3, 1971; 167, L23, 1971. A.J., 73, 854, 1968; 74, 515, 1969. Ap.Let., 13, 165, 1973. M.N., 169, 579, 1974. "Nuclei of Galaxies", p.81, 1971. IAU Symp. 44, p.155, 1972. Bull.A.A.S., 4, 332, 1972. Ast. Tsirk. No.633, 1971; No.688, 1972; No.831, 1974.
Sptm. Ap.J., 151, 807, 1968; 161, 811, 1970; 162, 743, 1970; 164, 1, 1971. Ap.J.Let., 154, L53, 1968; 155, L129, 1969; A.J., 73, 849, 1968. C.R.Acad.Sc., Paris, 264, 89, 1162; 265, 374, 1967. Ann. Ap., 31, 559, 1968. A.&A., 1, 305, 1969. Mem.S.A.Ital., 43, 263, 1972. Bull.A.A.S., 6, 342, 1974. Ast. Tsirk. No.454, 1967; No.467, 1968. IAU Symp. 29, pp.75,90, 1968. Nuclei of Galaxies, p.151, 1971.
Pol. Ap.J.Let., 170, L53, 1971; 172, L23, 1972; 174, L127, 1972. Astrofizika, 4, 409, 1968; 7, 417, 1971; 8, 509, 1972. Ast. Tsirk. No.454, 1967; No.526, 1969. Acta Ast., 21, 311, 1971. Ap. Let., 12, 69, 1972.
Int. motions, mass of N: Ap.J., 158, 859, 1969; 159, 115, 1970; 181, 51, 1973; 187, 445, 1974. A.J., 73, 854, 1968.
HI 21 cm. A.&A., 10, 198, 1971. M.N., 161, 25P, 1973. IAU Symp. 44, p.267, 1972.
Radio. A.J., 73, 876, 1968; 78, 18, 1973. A.&A., 15, 110, 1971; 31, 447, 1974; 33, 351, 1974. Ap.J., 183, 791, 1973. Sov. A.J., 16, 795, 1973.
X-rays. Ap.J.Let., 164, L43, 1971; 173, L99, 1971. A.&A., 28, 467, 1973. Bull.A.A.S., 3, 236, 399, 1971; 6, 430, 1974.
- N4150 Ptm. 12 col.: Ap.J., 145, 36, 1966.
- N4152 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4156 = Ho 345b = K 325. P(a) w. N4151 at 5'2, and Ho 345c at 7'. K notes double N.
Photo., and Ptm. Astrofizika, 10, 493, 1974.
SN1974. IAU Cir. No.2632, 1974.
- A1208+40 = Ho 342b, at 13' sf N4145. Sp. w. small satell. attached.
Photo., Spec., Ptm. Astrofizika, 10, 493, 1974.
- A1208+02 = DDO 110 = UGC 7178. Misident. in UGC.
- N4157 SN1937a. Supernovae & SN Remnants, Ap. & Space Sc. Lib., vol.45, 204, 1974.
SN1955a and Photo. P.A.S.P., 77, 456, 1965.
- N4162 SN1965g. IAU Cir. No.1904, 1965. Ast. Tsirk. No.238, 1965. Inf. Bull.V.S., No.90, 1965.
- N4165 P(a) w. N4168 at 2'7.
Photo. Mem.S.A.Ital., 44, 65, 1973 = Cont.Asiago No.284.
Ptm. Ap.Let., 9, 77, 1971.
SN1971g. IAU Cir. No.2321, 2322, 1971. Ast. Tsirk. No.618, 629, 631, 650, 1971. Ap.Let., 9, 77, 1971. Mem. S.A.Ital., 44, 65, 1973 = Cont. Asiago No.284.
- N4168 P(a) w. N4165 at 2'7. Brightest in a group.
Ptm. Ap.J., 143, 187, 1966; 146, 28, 1966.
- A1209+29 In N4131 group.
- N4178 = I3042. Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Rot.vel. A.&A., 8, 364, 1970.
SN1963i. P.A.S.P., 76, 220, 1964. Var.S.Bull.(USSR), 15, 107, 1964. Mem.S.A.Ital., 36, 299, 1965 = Cont.Asiago, No.182.
- N4183 SN1968u. IAU Cir., No.2109, 1968. Ast. Tsirk., No.488, 1968.
- A1211+16 = Arp 260 = VV 128 = K 326. Close pair at 35". F diff. extens. s of large comp.
Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.

N4190 = VV 104. HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.

N4189 = I3050. In group w. N4164, 93.
Photo. A.J., 69, 757, 1964.
Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.
SN1966e. IAU Cir. No.1960, 1966. Ast.Tsirk., No.381, 1966.

N4192 = M 98 = Ho 348a. P. w. N4186 at 11'5 sf (= Ho 348b) and Ho 348c at 9'5 sp.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
10u: Ap.J.Let., 176, L95, 1972.

N4193 In N4189 group.

N4186 = UGC 7240 = MCG 3-31-81 = Ho 348b. P. w. N4192 at 11'5. Misident. in UGC and MCG.

N4194 = Mk 201 = I Zw 33 = Arp 160 = VV 261. F plumes and jets to the n.
Photo. Ap.J., 148, 321, 1967; 156, 325, 1969.
Ptm. 10, 20u: Ap.J.Let., 176, L95, 1972. Bull.A.A.S., 4, 223, 1972.
Spec. Ap.J., 148, 321, 1967; 156, 325, 1969.
Rot. mass. Ap.J., 156, 325, 1969.
HI 21 cm. A.&A., 22, 281, 1973. A.J., 79, 671, 1974.

A1212+36B P(b?) w. comp. at 0'6.

N4204 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4206 = Ho 353b. In multiple system w. N4216 at 10'7, N4222 and I 771 (Ho 353d).

A1212+06 = Haro 6 (Bol. Tonantzintla, No.14, June 1956). N4197 at 1' p. UGC ident. wrong.
Ptm. A.J., 73, 882, 1968; 75, 1143, 1970. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4211A,B = Arp 106 = VV 199 = K 327. Listed in BGC as A1214A,B. Connected pair at 35"; diff. tail to comp. B.

N4212 = N4208.

N4214 = N4228. Photo. A.J., 74, 516, 1969. Ap.J., 194, 559, 1974.
Spec. A.J., 74, 515, 1969. Mem.S.A.Ital., 39, 453, 1968.
Sptm. P.A.S.P., 77, 90, 1965.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 156, 847, 1969; 194, 559, 1974.
Sptm. Ap.J., 168, 327, 1971.
Dist. modulus: Ap.J., 194, 559, 1974.
SN1954a. P.A.S.P., 75, 505, 1963. A.&A., 16, 247, 1972. Ap.J., 182, 225, 1973.
HI 21 cm. Ap.J., 142, 616, 1965; 150, 8, 1967.

N4218 = Haro 28 (Bol. Tonantzintla, No.14, June 1956). P(a) w. N4220 at 15'.
Dim., Ptm., Spec. P.A.S.P., 80, 29, 1968. A.J., 73, 882, 1968.

N4216 = Ho 353a. In multiple system w. N4206, 4222, I0771 (Ho 353d).
Photo. A.J., 72, 1032, 1967.
Ptm. A.J., 72, 1032, 1967. Isodens. Ap.J.Suppl., 26, No.230, 1973.
Rot. vel. A.&A., 8, 364, 1970.

N4217 = Ho 354a. P. w. N4226 at 7'4.

N4215 Ptm. Ap.J., 146, 28, 1966.

N4220 P(a) w. N4218 at 15'.

N4219 Dim. and mag. P.A.S.P., 83, 310, 1971.

N4222 = Ho 353c. In multiple system w. N4206, 4216, I0771 (Ho 353d).

N4236 = Ho 357a. P. w. Ho 357b at 9'. Emiss. patch 5'5 SE end = VII Zw 446.
Photo. A.&A., 24, 411, 1973. Ap.J., 190, 525, 1974; 191, 603, 1974.
Ptm. B Blue *: Ap.J., 191, 603, 1974.
HII reg., Dist. modulus: Ap.J., 190, 525, 1974.
HI 21 cm. Ap.J., 150, 8, 1967. A.&A., 24, 405, 411, 1973.

N4231, 4232 = Ho 356a,b. Pair at 1'1.

N4238 = Obj. No. 5 in foreground of cluster of compact gal._p = 16 to 19. (Zwicky 1971, p.199).

N4233 Ptm. Ap.J., 146, 28, 1966.

N4234 = Ho 358a (Ho 358b at 1'9 is a*) = Haro 7 (Bol. Tonantzintla No.14, June 1956).
Photo. Ap. & Space Sc. Lib., vol. 23, p.166, 1971.
Dim., Ptm. A.J., 75, 1143, 1970.

N4235 = I3098 = Ho 359a. P(a) w. N4246 at 12', N4247 at 13'.

N4244 Ptm. 12 col.: Ap.J., 145, 36, 1966.
Rot. vel. A.&A., 8, 364, 1970.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
HI 21 cm. Ap.J., 142, 616, 1965; 150, 8, 1967. A.&A., 23, 93, 1973.
up. limit in halo: Phys. Rev. Let., 17, 1203, 1966.

- N4242 HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 156, 847, 1969.
- N4245 P. w. N4253 at 16'5.
- N4250 = VII Zw 447. $m_p = 13.0$ in CSCG where class. SBc is incorrect.
- A1215+17 Ptm. Isodens. Ap.J.Suppl., 26, No.230, 1973.
- I3112 SN1963g. Ast. Tsirk., No.244, 1963. Inf. Bull. V.S., No.25, 1963.
- N4248 = Ho 363b. P. w. N4258 at 13'3.
- N4246 = I3113 = Ho 359b, in multiple syst. w. N4235 at 12', N4247 at 5'3.
- N4247 = Ho 359c. in multiple syst. w. N4235, 4246.
- N4253 P. w. N4245 at 16'5.
- N4254 = M 99.
Photo. P.A.S.P., 79, 593, 1967; 80, 462, 1968. Izv. Crimea Obs., 40, 96, 1969.
 Astrofizika, 6, 367, 1970. A.&A., 29, 57, 1973.
Ptm. Izv. Crimea Obs., 40, 96, 1969; 44, 40, 1972. Astrofizika, 6, 367, 1970. Sov.A.J., 13, 593, 1970. IAU Symp. 38, 83, 1970. IAU Symp. 44, 62, 1972.
 Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec. P.A.S.P., 79, 593, 1967.
HII reg. Ap.J.Suppl., 27, No.239, 1974.
SN1967h. IAU Cir. No.2021, 1967. M.N.A.S.S.A., 26, 148, 1967. P.A.S.P., 80, 461, 1968.
 Nature, 218, 856, 1968. Poss. SN Rem.: IAU Symp. 44, 82, 1972.
SN1972q. IAU Cir. No.2472, 2476, 1973. A.&A., 29, 57, 1973.
Radio. Aust. J. Phys., 21, 193, 1968.
- I0775 P. w. N4267 at 14'5.
- N4258 = Ho 363a. P. w. N4248 at 13'3.
Descr., structure. IAU Symp. 58, p.392, 1974.
Photo. Ap.J., 149, 487, 1967. A.&A., 9, 181, 1970; 21, 169, 1972. Mem.S.A.Ital., 44, 417, 1973 =
 Cont. Asiago, No.301. IAU Symp. 58, p.391, 1974.
Ptm. 5 col.: A.J., 73, 313, 1968. U.B.V.R.I: A.J., 73, 866, 1968.
B Isoph. Mem. S.A.Ital., 44, 417, 1973.
Spec., Int. motions. Ap.J., 149, 487, 1967; 192, 1, 1974.
Sptm. Sov.A.J., 13, 593, 1970.
Pol. Astrofizika, 4, 409, 1968.
Rot., mass. A.J., 71, 157, 1966. J.Observ., 48, 247, 1965 = Pub. O.H.P., 8, No.16.
 Bol. Tonantzintla, 4, No.26, 1965. Ap.J., 192, 1, 1974.
Interfer. Ha. A.&A., 9, 181, 1970. C.R.Acad. Sc., Paris, B, 275, 759, 1972.
HI 21 cm. Ap.J., 150, 8, 1967.
Radio. Ap.J., 122, 1333, 1965. A.&A., 21, 169, 1972. IAU Symp. 58, pp.380, 390, 1974.
 Proc. 1st Eur. Ast. Meet., vol.3, p.1, 1974. Poss. SN Rem.: A.&A., 26, 105, 1973.
 Supernovae and SN Remnants, Ap. & Space Sc. Lib., vol.45, p.56, 1974.
- A1216+04 = Mk 49 = Haro 8 (Bol. Tonantzintla, No.14, June 1956). In Zwicky 1971.
Photo. Astrofizika, 4, 475, 1968.
Dim., Ptm., Spec. A.J., 75, 1143, 1970.
Sptm. Ap.J., 171, 5, 1972.
- A1216+14 F blue obj. in Virgo (No.56).
Posit., Ptm., Spec.: A.J., 72, 59, 1967.
- N4259 = Ho 368e. In group w. N4273.
- N4261 = 3C 270. P. w. N4264 at 3'5.
Descr., class.: Ap.J., 140, 35, 1964; 143, 1002, 1966. P.A.S.P., 80, 129, 1968.
Photo. Ap.J., 143, 1002, 1966; 163, 195, 1971; 176, 47, 1972.
Ptm. Ap.J., 146, 28, 1966. Isodens.: Ap.J., 163, 195, 1971.
 B.V.R: Ap.J., 178, 25, 1972; 183, 731, 1973. 10 col.: Ap.J., 179, 731, 1973.
Radio. Ap.J., 142, 106, 1965; 144, 568, 1966; 147, 24, 908, 1967; 161, 1, 1970; 176, 47, 1972;
 179, 439, 1973. A.J., 72, 230, 1967; 73, 1, 1968; 76, 211, 1971. Sov. A.J., 9, 238, 1965;
 13, 21, 1969. M.N., 152, 439, 1971. Bull.A.A.S., 6, 341, 1974.
- N4262 Ptm. Ap.J., 146, 28, 1966. Bull.A.A.S., 5, 349, 1973.
- N4264 P(a) w. N4261 at 3'5.
- N4266 In group w. N4273.
- I3155 = Ho 365b. P. w. N4269 at 1'.
- N4267 P. w. I0775 at 14'5.
- N4268 = Ho 368d. In group w. N4273.
- N4269 = Ho 365a. P. w. I3155 at 1'.
Ptm. Isodens.: Ap.J. Suppl., 26, No.230, 1973.
- N4270 = Ho 368c. In group w. N4273.
Ptm. Ap.J., 146, 28, 1966.

- N4273 = Ho 368c. Brightest of group.
SN1936a. Ann. Rev. Ast. Ap., vol.2, p.249, 1964. Supernovae & SN Remnants, Ap. & Space Sc. Lib.,
 vol.45, p.204, 1974.
- N4277 = Ho 368f. In group w. N4273.
- N4278 = Ho 369a = B2 1217+29. P. w. N4283 at 3'5.
Ptm. U.B.V.R.I., J.K.L.: Ap.J., 143, 187, 1966. 5 col.: A.J., 73, 313, 1968.
10 col.: Ap.J., 179, 731, 1973.
Spec. Ap.J.Let., 164, L35, 1971.
Sptm. Nuclei of Galaxies, p.151, 1971.
Pol. Ap.J.Let., 179, L93, 1973.
Dyn., mass. Ap.J., 139, 284, 1964.
Radio. Ap.J.Let., 151, L135, 1968; 152, L63, 1968. Ap.J., 157, 481, 1969; 189, 379, 1974.
 Ap.Let., 2, 187, 968; 6, 49, 1970. A.J., 75, 523, 1970; 77, 568, 1972. Sov.A.J., 13, 881,
 1970. Ast. Tsirk., No.545, 1970. IAU Symp. 44, 222, 1972.
- A1217+12 F blue obj. in Virgo No.169, (A.J., 72, 59, 1977).
Spec. Ann. Rep. Dept. Terrestrial Magnetism, Carnegie Inst., p.288, 1969.
- N4281 = Ho 368b. In group w. N4273.
- N4283 = Ho 369b. P. w. N4278 at 3'5, N4286 at 5'2.
Ptm. 10 col.: Ap.J., 179, 731, 1973.
Dyn., mass. Ap.J., 139, 284, 1964.
- N4291 P(a) w. N4319 at 7'4.
- N4288 = DDO 119 = Ho 371a. P. w. Ho 371b at 2'2.
- N4286 = I3181. P. w. N4283 at 5'2.
- N4290 = Ho 373a. P. w. N4284 (Ho 373b), Sc?, at 4'5.
- N4293 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4292 = Ho 375a. P. w. Ho 375b at 2'2.
- N4294 = Ho 376a = K 330. P. w. N4299 at 5'5. $V_{21} = +350 \pm 9$ from sources R1, R4 is for N4294+N4299.
- N4298 = Ho 377a = K 332a. P(a) w. N4302 at 2'4.
- N4301 = MCG 1-32-19 = UGC 7411. 12' n.f. N4292. The obj. listed as N4301 in the BGC is = N4303A.
 Note corr. to NGC coord. and note in DI. Misident. in Heidelberg 9, Medd. Lund (II) No.136,
 UGC, and RNGC.
- N4299 = Ho 376b. P. w. N4294 at 5'5.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4302 = Ho 377b = K 332b. P. w. N4298 at 2'4.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4303 = M61 = Ho 369a. P. w. N4303A at 10'.
Descr., class. P.A.S.P., 79, 152, 1967. Nuclei of Galaxies, p.27, 1971.
Photo. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.396, 1965.
 A.J., 74, 515, 1969. Astrofizika, 6, 367, 1970. IAU Symp. 38, pp.11, 23, 1970.
 Nuclei of Galaxies, p.26, 1971.
Ptm. A.J., 74, 354, 1969. Astrofizika, 6, 367, 1970. 10u: Ap.J.Let., 159, L165, 1970; 176, L95, 1972.
Spec. A.J., 74, 515, 1969. Ap.J., 159, 405, 1970.
Sptm. Observ., 88, 239, 1968. Ast. Tsirk., No.648, 1971. Izv. Crimea Obs., 48, 37, 1973.
HII reg. Ap.J.Suppl., 27, No.239, 1974.
SN1961i. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.396, 1965. Ap.J., 182, 225, 1973.
SN1964f. IAU Cir. Nos.1868, 1873, 1964. Comm. Padova, No.35, 1964.
HI 21 cm. M.N., 150, 337, 1970.
Radio. A.J., 78, 18, 1973.
- N4305, 4306 = Ho 381a,b = K 333. Pair at 3'.
- N4307 = Ho 380a. P. w. Ho 380b at 3'2.
- N4319 P. w. N4291 at 7'4. Suspected connect. w. Mk 205 ($V = 21,500 \text{ km s}^{-1}$) at 0'7s. See Ap.Let., 9, 1,
 1971; 12, 139, 143, 1972. Ap.J.Let., 176, L5, 1972; 194, L125, 1974. IAU Symp. 58, p.204, 1974.
Photo. Ap.Let., 9, 1, 1971. A.&A., 15, 110, 1971. Ap.J.Let., 176, L5, 1972. Ap.J., 183, 29, 1973.
 IAU Symp. 58, 204, 1974.
Ptm. Isodens.: Bull.A.A.S., 5, 397, 1973. Ap.J.Let., 194, L125, 1974. IAU Symp. 58, p.207, 1974.
Spec. Ap.Let., 9, 1, 1971. Mk 205: Ap.J.Let., 161, L113, 1970.
Radio. A.&A., 15, 110, 1971.
- N4309 = Ho 382a. P. w. Ho 382b at 1'6.
- N4303A = Ho 379b. P. w. N4303 at 10'. Listed in BGC as N4301.
- N4310 = N4311.
- N4312 = Ho 387b. P. w. N4321 at 18', and group of F gal.
- N4314 Descr., Dim., Photo. Ap.J., 182, 659, 1973.
Ptm. Sov. A.J., 16, 71, 1972. Ap.J., 182, 659, 1973.

- A1220+12 F blue obj. in Virgo No.175 (A.J., 72, 59, 1967).
Spec. Ann. Rep. Dept. Terrestrial Magnetism, Carnegie Inst., p.288, 1969.
- N4313 = Ho 385a. (Ho 385b at 4'3 is a *).
- N4321 = M100 = Ho 387a. P. w. N4312 at 18'.
Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967. IAU Symp. 38, p.11, 1970.
Photo. A.J., 74, 515, 1969. Ap.J., 176, 21, 1972; 194, 559, 1974. A.&A., 29, 249, 1973.
 IAU Symp. 38, p.11, 1970.
Ptm. U,B,V: Sov.A.J., 16, 71, 1972. Ap.J., 176, 21, 1972 (Dwarf companions).
Spec. A.J., 74, 515, 1969. Ap.J., 186, 807, 1973.
Sptm. Observ., 88, 239, 1968.
Rot., mass. Ap.J., 186, 807, 1973.
HII reg. Ap.J.Suppl., 27, No.239, 1974. Ap.J., 194, 559, 1974. Dist.modulus: Ap.J., 194, 559, 1974.
SN1901b. SN1914a. P.A.S.P., 29, 180, 213, 1917. Ap.J., 88, 285, 1938. SN1955e (noted as SN1960 in BGC)
HI 21 cm. M.N., 150, 337, 1970.
Radio. A.J., 78, 18, 1973. A.&A., 29, 249, 1973.
- N4322 = N4323. 4'n N4321. (= Ho 387?). Dwarf comp. No.4 in Ap.J., 176, 21, 1972.
Ptm. U,B,V: Ap.J., 176, 21, 1972.
- N4324 = Ho 388a. (Ho 388b at 1'1 is a *).
- N4335 SN1955e. IAU Cir. No.2058, 1968. P.A.S.P., 81, 224, 1969 (w. Photo.).
- N4329 P(a) w. S sp. at 3'0. Many others in field.
- A1220+02 = Mk 50. Class 1 Seyfert N.
Spec. Ap.J., 159, 765, 1970.
- N4339 Ptm. Ap.J., 146, 28, 1966.
- N4340 = Ho 391b. P(a) w. N4350 at 5'6.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4344 = Ho 390a. (Ho 390b at 1'7 is a *).
- N4343 For ident. of NGC and IC obj. in field, see P.A.S.P., 79, 627, 1967, or CGCG, vol.III, p.391.
Ptm. Ap.J., 146, 28, 1966.
- I3256 = N4342. Note change of ident. from BGC. (see P.A.S.P., 79, 627, 1967).
Ptm. Ap.J., 146, 28, 1966 (listed as N4342).
- I3258 Dwarf magellanic. In foreground of Virgo Cl.?
Photo. A.J., 69, 757, 1964. Ap.J.Let., 157, L155, 1969.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec., Dist. modulus: Ap.J.Let., 157, L155, 1969.
- I3260 = N4341. Note change of ident. from BGC (see P.A.S.P., 79, 627, 1967).
- N4350 = Ho 391a. P(a) w. N4340 at 5'6.
- N4353 = I3265, 3266.
Descr., Phys. data: A.J., 79, 1242, 1974.
- N4351 = N4354. Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec. A.J., 77, 4, 1972. P.A.S.P., 84, 589, 1972.
- I3268 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec. A.J., 77, 4, 1972. P.A.S.P., 84, 589, 1972.
- N4360 Ptm. Ap.J., 146, 28, 1966.
- N4365 P(a) w. N4370 at 10'.
Dyn., mass. Ap.J., 139, 284, 1964.
- N4370 P(a) w. N4365 at 10'.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4371 Ptm. Astrofizika, 2, 53, 1966. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4375 SN1960j. P.A.S.P., 73, 175, 1961.
- I3290 P. w. N4373 at 2'0.
- N4374 = M84 = 3C 272.1 = Ho 403b. P(a) w. N4387 at 10'5.
Descr. Chain of Gal.: P.A.S.P., 80, 129, 1968.
Photo. A.J., 69, 236, 1964; 79, 671, 1974.
Ptm. Astrofizika, 1, 38, 1965. 5 col.: A.J., 73, 313, 1968. U,B,V: A.J., 74, 335, 1969.
 Bol. A.A.Argentina, No.16, 17, 1971. Ap.J., 178, 25, 1972. E,V,R: Ap.J., 183, 731, 1973.
Isodens.: A.J., 79, 671, 1974.
Spec. Ap.J.Let., 164, L35, 1971.
Sptm. Observ., 88, 239, 1968. Sov.A.J., 13, 593, 1970. Ap.J.Let., 193, L49, 1974.
 Bull.A.A.S., 6, 332, 1974.
Dyn., mass. Ap.J., 139, 284, 1964.
SN1957b. A.J., 69, 235, 1964. Ap.J., 182, 225, 1973.
Radio. Observ., 84, 30, 1964. A.J., 72, 230, 1967; 73, 1, 1968; 75, 523, 1970. Ap.Let., 6, 49, 1970.
 M.N., 157, 349, 1972. A.&A., 25, 451, 1973; 34, 341, 1974. Ap.J., 196, 303, 1974.
X-rays. Ap.J.Let., 165, L49, 1971.

N4373 P. w. I3290 at 2'0.

N4377 = III Zw 65, No.1, 2 F compacts Nos. 2, 3 25" W, 15" NE, $m_p = 16.8, 16.9$
Ptm. Ap.J., 146, 28, 1966.

N4379 Ptm. Ap.J., 146, 28, 1966. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4382 = M85 = Ho 397a = K 334a. P. w. N4394 at 7'8. F diff. comp. at 3' s.
Photo. A.J., 69, 236, 1964. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.396, 1965.
Ptm. Ap.J., 169, 209, 1971. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
SNI960r. A.J., 69, 236, 1969. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.395, 1965.

N4391 = VII Zw 454. $m_p = 13.8$.

N4385 = Mk 52.
Ptm. U.B.V: Ap.J., 171, 5, 1972. 10u: Ap.J.Let., 176, L95, 1972.
Spec. Ap.J., 159, 405, 1970.
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972.
Radio. P.A.S.P., 86, 649, 1974.

I3322A At 19' sf N4365.

N4387 P. w. N4374 at 10'5.
Ptm. Ap.J., 146, 28, 1966.

N4388 = Ho 403c. Ptm. Astrofizika, 2, 53, 1966.

A1223+15 F blue obj. in Virgo No.46 (A.J., 72, 59, 1967).
Spec. Ann. Rep. Dept. Terrestrial Magnetism, Carnegie Inst., p.288, 1969.

N4390 Ptm. Isodens.: Ap.J. Suppl., 26, No.230, 1973.

N4395 N4399, 4400, 4401 are part of it.
HII reg., Dist. modulus: Ap.J., 194, 559, 1974.

N4394 = Ho 397b = K 334b. P. w. N4382 at 7'8.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
HII reg. Ap.J.Suppl., 27, No.239, 1974.

N4396 = Ho 400a. (Ho 400b at 6'2 is a dble *).

N4402 = Ho 403d. P(a) w. N4406 at 10'.
Ptm. Astrofizika, 2, 53, 1966. IAU Symp. 29, p.398, 1968.

N4406 = M86 = Ho 403a. P(a) w. N4402 at 10'.
Photo. A.J., 79, 671, 1974.
Ptm. Astrofizika, 1, 38, 1965. 12 col.: Ap.J., 145, 36, 1966. 5 col.: A.J., 7, 313, 1968; 74, 50, 1969. P.V.: Ap.J., 169, 209, 1971. Bol.A.A.Argentina, No.16, 17, 1971. Isodens.: A.J., 79, 671, 1974.
Spec. vel. disp.: IAU Symp. 15, p.112, 1962.
Sptm. Observ., 88, 239, 1968. Mem.S.A.Ital., 43, 263, 1972.
Pop. model: A.J., 73, 313, 1968.
Dyn., mass. Ap.J., 139, 284, 1964.

A1223+48 = Mk 209 = I Zw 36 = Haro 29 (Bol. Tonantzintla, No.14, June 1956).
Descr., Photo. Ap.J.Let., 150, L31, 1967.
Ptm., Spec. A.J., 75, 1143, 1970.

N4410A,B = K 335. Close pair at 0'3 in common env.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
SNI965a. IAU Cir. No.1884, 1885, 1965. Ast. Tsirk., No.315, 1965. Tokyo Ast. Bull., No.176, 1967.

N4411A = K 336a. Pair w. N4411B at 4'.

N4414 SNI974. IAU Cir. Nos.2664, -66, -68, -71, -74, -78, 1974. Mitt. Ver. Sterne Sonneberg, 6, 155, 1974.

N4413 = Ho 403f.

N4412 Sptm. Observ., 88, 239, 1968.

N4415 Ptm. Ap.J., 146, 28, 1966.

N4411B = K 336b. Pair w. N4411A at 4'.

I3355 = DDO 124 = UGC 7548.

N4420 = N4409.

N4421 Sptm. Observ., 88, 239, 1968.

A1224+48 = Mk 210.
Spec. vel. Source Z1, +7200 (Astrofizika, 7, 177, 1971) rejected.
SNI960i and Photo. P.A.S.P., 73, 175, 1961.

N4424 SNI895a. P.A.S.P., 48, 227, 1936, Occ. Notes R.A.S., 1, 53, 1939. Z. f. Ap., 49, 202, 1961.

N4425 = Ho 403e. Ptm. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.

- N4430 = K 338a. Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4428 = Ho 407b. P(a) w. N4433 at 7'0.
- N4431 = Ho 408c. P(a) w. N4436 at 3'5, N4440 at 6'8.
- N4434 Ptm. Ap.J., 146, 28, 1966.
- N4433 = Ho 407a. P(a) w. N4428 at 7'0.
Descr., class., Physical data; Astrofizika, 3, 427, 1967. A.J., 79, 1242, 1974.
Ptm. Bull.A.A.S., 5, 349, 1973. A.&A., 31, 165, 1974.
Spec. Ast. Tsirk. No.698, 1972. A.&A., 31, 165, 1974.
Sptm. Pop. model: A.&A., 31, 165, 1974.
Radio. Aust. J. Phys., 21, 193, 1968.
- N4435 = Arp 120 = VV 188 = Ho 409b. P(b) w. N4438 at 4'3.
Photo. A.J., 79, 671, 1974.
Ptm. Astrofizika, 1, 38, 1965. Ap.J., 146, 28, 1966. Bol.A.A.Argentina, No.16, 17, 1971.
Isodens.: Ap.J.Suppl., 26, No.230, 1973. A.J., 79, 671, 1974.
Sptm. Observ., 88, 239, 1968.
- N4436 = Ho 408a. P(a) w. N4431 at 3'5, N4440 at 3'3.
- N4438 = Arp 120 = VV 188 = Ho 409a. P(b) w. N4435 at 4'3.
Photo. A.J., 79, 671, 1974.
Ptm. Astrofizika, 2, 53, 1966. IAU Symp. 29, p.398, 1968. Bol.A.A.Argentina, No.16, 17, 1971.
Isodens.: Ap.J.Suppl., 26, No.230, 1973. A.J., 79, 671, 1971.
Sptm. Observ., 88, 239, 1968.
Radio. Aust. J. Phys., 21, 193, 1968. Nature, 241, 260, 1973. M.N., 167, 251, 1974.
- N4440 = Ho 408b. P(a) w. N4436 at 3'3, N4431 at 6'8.
Ptm. Astrofizika, 2, 53, 1966. Sov.A.J., 10, 34, 1966.
- I3381 Note corr. to BGC Dec.
- N4449 Photo. Ap.J., 152, 1067, 1968; 194, 559, 1974. A.J., 74, 515, 1969. A.&A., 1, 449, 1969.
Cont. Asiago, No.203, 1968.
P.A.S.P., 77, 130, 1965. Ap.J., 152, 1067, 1968. Vest. Kiev Obs., 13, 104, 1971; 14, 103, 1972.
Spec. A.J., 74, 515, 1969. A.&A., 1, 449, 1969.
Sptm. Ap.J., 159, 809, 1970. Sov.A.J., 13, 593, 1970. Far U.V: N.A.S.A., SP310, p.559, 1972.
Dyn. Cont. Asiago, No.191, 1967 (S.A.Ital., Atti X Conv. Catania, 1966).
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 156, 847, 1969; 194, 559, 1974.
A.&A., 1, 449, 1969. Dist.modulus: Ap.J., 194, 559, 1974.
HI 21 cm. Ap.J., 150, 8, 1967.
Radio. A.&A., 31, 447, 1974.
- A1225+44 = Mk 212 = I Zw 37, Nos.1, 2 = K 340. Close pair at 0'2. I Zw 37, No.3 = Mk 211 at 2'8 np
(z = 0.041), $m_p = 16.0$.
- N4450 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4453 SN1966f. P.A.S.P., 79, 456, 1967 (w. Photo.). A.N., 290, 135, 1967.
- N4457 Sptm. Observ., 88, 239, 1968.
- N4458 = Ho 411b. P(a) w. N4461 at 3'7.
Ptm. Astrofizika, 1, 38, 1965. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.
- N4459 N4468 at 8'5, N4474 at 13'5.
Ptm. Astrofizika, 1, 38, 1965. Ap.J., 146, 28, 1966. Bol.A.A.Argentina, No.16, 17, 1971.
Sptm. Bull.A.A.S., 5, 447, 1973. Ap.J.Let., 193, L49, 1974.
Dyn., mass. Ap.J., 139, 284, 1964.
- N4461 = Ho 411a. P(a) w. N4458 at 3'7.
Ptm. Astrofizika, 1, 38, 1965. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.
- A1226+11 F blue obj. in Virgo, No.138.
Posit.,Spec. A.J., 72, 59, 1967.
- N4464 Ptm. Ap.J., 179, 731, 1973.
- I3413 Misident. as I3418 in A.&A. Suppl., 3, 325, 1971.
- I3414 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4467 = Ho 413c. P.w. N4472 at 4'2.
- N4466 = Ho 412a. (Ho 412b at 2'1 is a *).
- I3418 = DDO 130 = UGC 7630.

- N4472 = M49 = Arp 134 = Ho 413a. P. w. N4467 at 4'2, F anon. dIm at 5'5 sf, N4470 at 10'5.
Descr., class. Ap.J., 143, 1002, 1966; 148, 321, 1967.
Photo. P.A.S.P., 78, 367, 1966. Ap.J., 143, 1002, 1966; 148, 321, 1967. Nuclei of Galaxies, p.27, 1971.
Ptm. Ap.J., 139, 284, 1964; 146, 28, 1966. 5 col.: Ap.J., 73, 313, 1968. B,V,R: Ap.J., 173, 485, 1972; 178, 1, 1972; 183, 731, 1973. 10 col.: Ap.J., 179, 731, 1973.
Spec. Ap.J.Let., 164, L35, 1971. Vel. disp.: IAU Symp. 15, p.112, 1962.
Sptm. Ap.J., 164, 11, 1971; 169, 209, 1971; 175, 649, 1972; 177, 185, 1972; Ap.J.Let., 193, L49, 1974. A.J., 74, 50, 1969; 77, 333, 1972. Bull.A.A.S., 6, 332, 1974. IAU Symp. 58, p.169, 1974.
Pol. Ap.J.Let., 179, L93, 1973.
Dyn. mass. Ap.J., 139, 284, 1964.
HI 21 cm. up.limit: A.J., 77, 568, 1972; 79, 667, 1974. A.&A., 25, 451, 1973. Sources R4(M.N., 165, 231, 1973) and R5 (Nature, 208, 993, 1965) rejected.
Radio. Ap.Let., 6, 49, 1970. A.J., 75, 523, 1970. IAU Symp. 44, p.222, 1972.
- N4473 Ptm. Ap.J., 139, 284, 1964. Astrofizika, 1, 38, 1965.
Spec., vel. disp. Ap.J., 179, 55, 1973. Bull.A.A.S., 3, 476, 1971.
Sptm. Observ., 88, 239, 1968.
Dyn., rot., mass. Ap.J., 139, 284, 1964; 179, 55, 1973.
- N4474 Ptm. Ap.J., 146, 28, 1966. Bol.A.A.Argentina, No.16, 17, 1971.
- N4476 P(a) w. N4478 at 4'5.
Ptm. Ap.J., 146, 28, 1966.
- N4477 Ptm. Astrofizika, 1, 38, 1965.
Sptm. Observ., 88, 239, 1968.
- N4478 P(a) w. N4476 at 4'5.
Ptm. Astrofizika, 1, 38, 1965. 10 col.: Ap.J., 179, 731, 1973.
- N4486B = I Zw 38. Compact 7'3 np N4486.
Photo. Ap.J., 140, 1467, 1964.
Ptm. A.J., 70, 689, 1965. 10 col.: Ap.J., 179, 731, 1973.
Spec., vel. disp. IAU Symp. 15, p.112, 1962. Ap.J., 140, 1467, 1964. IAU Symp. 58, p.20, 1974.
Sptm. Ap.J.Let., 193, L49, 1974.
Dyn., mass. A.J., 70, 689, 1965. Ap.J., 179, 423, 1973.
- N4485 = Arp 269 = VV 30 = Ho 414b = K 341a. P(b) w. N4490 at 3'5.
- N4490 = Arp 269 = VV 30 = Ho 414a = K 341b. P(b) w. N4485 at 3'5.
Photo. Ann. Ap., 28, 698, 1965 = Pub. O.H.P., 7, No.50. Mem.S.A.Ital., 37, 433, 1966 = Cont. Asiago No.186. IAU Symp. 29, p.381, 1968. A.&A., 8, 204, 1970. IAU Symp. 38, p.11, 1970.
Ptm., Spec. Mem.S.A.Ital., 37, 433, 1966 = Cont. Asiago No.186.
Rot., mass. Mem.S.A.Ital. 37, 433, 1966. IAU Symp. 29, p.381, 1968. A.&A., 8, 204, 1970.
Ap.J., 184, 735, 1973.
HII reg. Ann.Ap., 28, 698, 1965.
Interfer. Ho: A.&A., 8, 204, 1970.
HI 21 cm. Ap.J., 150, 8, 1967.
Radio. M.N., 146, 265, 1969; 159, 15P, 1972. A.J., 78, 18, 1973. Nature, 241, 260, 1973.
Ap.J., 189, 399, 1974. A.&A., 31, 447, 1974.
- N4486 = M87 = Arp 152 = 3C 274 = Virgo A. eB cent. w. jet.
Descr., struc. P.A.S.P., 80, 129, 1968. Ap.J.Let., 165, L65, 1971.
Jet prop. Ap.J., 151, 861, 1968; 159, 415, 1970. A.J., 72, 796, 1967. Ap.Let., 2, 141, 1968.
Ap. & Space Sc., 14, 261, 1971. Astrofizika, 8, 337, 1972. Pub.A.S.Japan, 251, 175, 1973.
Ap.J.Let., 194, L1, 1974. Nature, 252, 661, 1974.
Photo. Ap.Let., 1, 1, 1967; 2, 141, 1968. Ap.J.Let., 165, L65, 1971; Ap.J., 159, 415, 1970; 163, 195, 1971; Ap.J.Let., 274, L65, 1972. Astrofizika, 8, 337, 1972. A.J., 79, 671, 1974.
Ptm. Ap.J., 139, 284, 1964. Astrofizika, 1, 38, 1965. Ap.Let., 2, 141, 1968.
U.B.V: Ap.J., 143, 187, 1966; 172, 485, 1972; 178, 25, 1972; 181, 19, 1973; 184, 319, 1973.
Ap.J.Let., 194, L1, 1974. A.J., 7, 335, 1969. 5 col.: A.J., 73, 313, 1968. 10 col.: Ap.J., 179, 731, 1973. Isoph., Isodens.: Ap.Let., 4, 17, 23, 1969. Ap.J., 163, 195, 1971.
A.J., 79, 671, 1974. I.R.I-10u: Ap.J., 143, 187, 1966. Ap.J.Let., 159, L165, 1970; 176, L95, 1972; 194, L1, 1974. A.J., 73, 866, 1968. Glob.Cl.: P.A.S.P., 80, 326, 1968; 86, 311, 1974.
A.J., 73, S114, 1968. J.R.A.S.Canada, 62, 367, 1968; 65, 183, 1971. Ap.J.Let., 152, L149, 1968.
Spec. Ap.Let., 1, 1, 1967; 2, 65, 1968. Ap.J., 149, 481, 1967; 191, 55, 1974. Ast.Tsirk., No.438, 1967. Sov.A.J., 12, 932, 1969. Vel.disp.: IAU Symp. No.15, p.112, 1962. Ap.J.Let., 156, L59, 1969. P.A.S.P., 81, 531, 1969.
Sptm. Observ., 88, 239, 1968. Ap.J., 169, 299, 1971. Sov.A.J., 11, 777, 1968.
IAU Symp. 58, 169, 1974.
Pol. Ap.J.Let., 170, L53, 1971; 179, L93, L97, 1974.
Dyn., mass. Ap.J., 139, 284, 1964; Ap.J.Let., 156, L59, 1969. P.A.S.P., 81, 531, 1969.
Mem. S.A.Ital., 41, 57, 1970; 43, 539, 1972.
SN1919a. P.A.S.P., 48, 237, 1936.
HI 21 cm. Intergal.: A.&A., 3, 382, 1969.
Radio. Ap.J., 142, 106, 1965; 144, 568, 1966; 147, 908, 1967; 148, 367, 1967; 151, 43, 771, 1968; 152, 43, 1968; 154, 423, 1968; 161, 1, 1970; 170, 208, 1971; 172, 299, 1972; 193, 303, 1974.
Ap.J.Let., 151, L27, 1968; 159, L19, 1970; 179, L141, 1973; 180, L61, 1973. A.J., 71, 864, 1966; 72, 230, 1967; 73, 1, S184, 1968; 74, 206, 1969; 75, 523, 1970; 76, 537, 1971; 77, 342, 1972; 78, 163, 536, 1973; 79, 139, 1974. Ap.Let., 4, 139, 1969; 6, 49, 1970; 8, 183, 1971.
A.&A., 3, 316, 382, 1969. M.N., 149, 319, 1970; 152, 145, 439, 1971; 156, 7P, 1972; 166, 1P, 1974. Mem.R.A.S., 77, Part 3, 1972. Nature, 231, 253, 1971. Proc. A.S.Aust., 1, 229, 1969.
Sov. A.J., 8, 1, 1964; 9, 238, 1965; 11, 792, 1968; 15, 340, 1971; 18, 42, 1974. IAU Symp. 44, p.222, 1972. V.L.B.I: Ap.J.Let., 158, L83, 1969. Ap.J., 177, 101, 1972. Owens Valley Rad. Obs. Rep., No.10, 1969.

(Continued)

- N4486 (Continued)
X-rays. Science, 152, 66, 1966; 158, 257, 1967. Ap.J.Let., 150, L199, 1967; 151, L131, 1968; 161, L1, 1970; 165, L49, 1971; 168, L1, 1971; 172, L41, 1972; 173, L99, 1972; 174, L65, 1972; 177, L1, 1972; 185, L13, 1973; 193, L57, 1974. Ap.J., 179, 375, 1973. A.J., 73, S97, 1968.
 Nature, 223, 162, 1969; 229, 544, 1971; 230, 188, 1971; 250, 471, 1974. Ap.Let., 10, 61, 1972.
 Bull.A.A.S., 3, 236, 1971; 4, 258, 260, 1972; 5, 33, 1973; 6, 429, 1974.
- A1228+12 F blue obj. in Virgo, No.132 (A.J., 72, 59, 1967).
Spec. Ann. Rep. Dept. Terrestrial Magnetism, Carnegie Inst., p.288, 1969.
- N4489 Ptm. Ap.J., 146, 28, 1966.
- N4492 = I3438.
- N4494 Ptm. 5 col.: A.J., 73, 313, 1968.
Spec., vel. disp., mass. Ap.J., 179, 55, 1973. Bull.A.A.S., 3, 476, 1973.
- N4497 Ptm. Ap.J., 146, 28, 1966.
- N4496A, B = N4505 = VV 76 = Ho 415a, b = K 343. P(c?) at 0'9.
Photo. A.J., 69, 236, 1964. Mem.S.A.Ital., 33, 147, 1962 = Pub.Obs. Bologna, VIII, No.10.
Ptm. V = 11.45, B-V = 0.61 (log A = 1.72, source G) for both objects combined.
Spec. Doubtful vel. of comp. B (Source G) rejected.
SNI960f. Mem.S.A.Ital., 33, 147, 1962. Ann.Ap., 27, 315, 1964 = Pub.O.H.P., 7, No.23. Coll. Int.
 Novae & SN, CNRS, Paris, P.190, 1965. A.J., 69, 236, 1964. C.R.Acad.Sc.Paris, 265, 430, 1967.
 A.&A., 20, 77, 87, 1972.
- N4498 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4501 = M88. Descr., class. Nuclei of Galaxies, p.27, 1971.
Photo. A.J., 74, 515, 1969. Coll. Int. Novae & SN, CNRS, Paris, p.166, 1965. IAU Symp.38, 11, 1970; No.44, p.373, 1972. Nuclei of Galaxies, p.27, 1971.
Ptm. Astrofizika, 2, 53, 1966. 5 col.: A.J., 73, 313, 1968. P,V: Bol.A.A.Argentina, No.16, 17, 1971.
Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec. A.J., 74, 515, 1969.
Sptm. Observ., 88, 239, 1968.
- N4503 Ptm. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.
- A1229+66B = VII Zw 466. Ring gal. in a group. Prob. assoc. w. VII Zw 467 at 1'f.
Descr., Photo. Observ., 90, 153, 1970. Ap.J., 194, 569, 1974. Cont. Asiago Obs., No.300b, p.79, 1973.
- N4517A = K344a. P(a) w. N4517 at 17'. = Reinmuth 80 in HA 88.2.
- A1230+09 E in Virgo Cl. See HMS 1956.
- I3476 Ptm. Ap.J.Suppl., 26, No.230, 1973.
SNI970a. IAU Cir. Nos.2214, 2226, 2229, 1970. Ast. Tsirk. No.570, 1970.
- A1230+46 = Mk 215. Sptm. Astrofizika, 7, 389, 1971.
- N4517 = N4437 = K 344b. P(a) w. N4517A at 17'.
- I3481, 3481A = Arp 175 = VV 43. Connected P(b) at 1'4 in Zwicky Triplet; see I3483.
- A1230+37 $m_p = 12$ in MCG, vol.II, 1964. $m_p = 13.4$ in CGCG, vol.III, 1966.
- N4515 Ptm. Ap.J., 146, 28, 1966.
- I3483 = Arp 175 = VV 43. Low velocity member of Zwicky Triplet; connection with I3481, 3481A at 4'2 doubtful (Arp 1966).
- N4519 = Ho 418a. P. w. Ho 418b at 3'.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4520 = I0799 w. IC coord. connected. Data under this number in BGC were for N4504.
- N4526 Ptm. Ap.J., 146, 28, 1966. 5 col.: A.J., 73, 313, 1968.
SNI969e. IAU Cir. No.2139, 1969.
- N4528 Ptm. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.
- N4527 Sptm. Observ., 88, 239, 1968.
SNI915a. P.A.S.P., 29, 180, 213, 1917.
Radio. Aust. J.Phys., 21, 193, 1968.
- N4534 = Ho 419a. (Ho 419b at 0'7 is a condens. in the gal. or a *).
- N4531 Sptm. Observ., 88, 239, 1968.
- N4532 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4535 = Ho 420a. P. w. Ho 420b at 5'.
Class., Photo. IAU Symp. 38, 11, 1970.
Ptm. 10μ: Ap.J.Let., 176, L95, 1972.
Spec. Ap.J., 159, 405, 1970.

N4533 P(a) w. N4536 at 8'2.

N4536 P9a) w.N4536 at 8'2.
Sptm. Observ., 88, 239, 1968.

A1232+06 = DDO 137 = Holmberg VII (1958). F comp. of N4532.

N4540 = Ho 421a. P(a) w. I3528 (Ho 421b?) at 1'5 nf (I3519 is at 4'1 np).
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4545 SN1940d. IAU Cir. No.818, 1940. A.N., 290, 85, 1966.

A1232+48 = I Zw 39, No.2, $m_p = 15.3$. P. w. No.1 at 1'8 p, $m_p = 17.0$.

I3528 = Ho 421b? P(a) w. N4540 at 1'5 sp.

N4507 = HA 88, 2 "New 2".
Ptm. I.R. 1-3.5 μ : M.N., 164, 155, 1973.
Spec. Bull.A.A.S., 4, 237, 1972.

N4548 P(a) w. N4571 at 27'.
Ptm. Sov.A.J., 10, 34, 1966.
HII reg. Ap.J.Suppl., 27, No.239, 1974.

N4550 = Ho 422a. P(a) w. N4551 at 3'.
Ptm. Ap.J., 146, 28, 1966. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Sptm. Observ., 88, 239, 1968.
Radio. A.J., 75, 523, 1970. Ap.Let., 6, 49, 1970.

N4551 = Ho 422b. P(a) w. N4550 at 3'.
Ptm. Ap.J., 146, 28, 1966. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Sptm. Observ., 88, 239, 1968.

N4552 = M89. Descr., Photo. Ap.J.Let., 165, L65, 1971.
Ptm. 12 col.: Ap.J., 145, 36, 1966. 5 col.: A.J., 73, 313, 1968.
Spec. Ap.J.Let., 164, L35, 1971.
Sptm. Observ., 88, 239, 1968. Ap.J.Let., 193, L49, 1974.
Pol. Ap.J.Let., 179, L93, 1973.
Dyn. mass. Ap.J., 139, 284, 1964.
Radio. "Curved" spectrum. A.J., 75, 523, 1970. Ap.Let., 6, 49, 1970. IAU Symp. 44, p.222, 1972.

I3543 Listed in BGC as I3546. (I3546 is 4's; see A.&A.Suppl., 12, 89, 1973).

N4556 Close pair w. comp. (V = 7987±150, Source S4) at 0'8 in Coma Cl.

N4559 = Ho 423a. 3 s anon. nearby (Ho 423b,c,d).
Photo. Ap.J., 194, 559, 1974.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
HII reg., dist. modulus. Ap.J., 194, 559, 1974.
SN1941a. Ann Rev. Ast. Ap., vol.2, p.249, 1964. Supernovae & SN Remnants, Ap. & Space Sc. Lib.,
 vol.45, p.207, 1974.

N4566 In Haro 32 (A1241+55A,B) group. Spec. A.J., 77, 448, 1972.

N4561 = I3569 = K 346.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

A1233+81 = VII Zw 475. $m_p = 16.9$.

N4565 = Ho 426a. 3 s anon. nearby (Ho 426b,c,d).
Ptm. 5 col.: A.J., 73, 313, 1968. Isoph. cent. reg. IAU Symp. 58, p.336, 1974.
Red halo: Bull. A.A.S., 6, 333, 1974.
Rot. vel. A.&A., 8, 364, 1970.

N4564 Sptm. Observ., 88, 239, 1968.
SN1961h. IAU Cir. Nos.1759, 1779, 1961. Ann.Ap., 27, 314, 548, 1965.

N4567, 4568 = Ho 427b,a = VV 219 = K 347. P(b) at 1'2.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Sptm. Observ., 88, 239, 1968.
Radio. N4567: Aust. J. Phys., 21, 193, 1968. N4567+4568: M.N., 167, 251, 1974.

I3576 = DDO 138. Descr., Photo. Ap.J.Let., 178, L77, 1972.
HI 21 cm. Ap.J.Let., 178, L77, 1972. A.&A., 34, 43, 1974.
Radio., X-rays. Ap.J.Let., 178, L77, 1972. Bull.A.A.S., 4, 413, 1972.

A1234-72 Extended R.S. Ident., coord., vel. M.N., 165, 245, 1973.

I3583 = Arp 76. Dwarf comp. of N4569 at 6'0. Poss. interacting.

N4569 = M90 = Arp 76. P(a) w. dwarf I3583 at 6'0 n. Poss. interacting.
Ptm. 10 μ : Ap.J.Let., 176, L95, 1972. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec. Mt.Wilson vel. (Source B) rejected. See Ap.J., 159, 405, 1970; 166, 1, 1971. Ap.J.Let., 161,
 L109, 1970. A.&A., 27, 433, 1973.
Sptm. Observ., 88, 239, 1968. A.&A., 19, 405, 1972; 27, 433, 1973.
Rot. Ap.J., 166, 1, 1971.
HII reg. Ap.J.Suppl., 27, No.239, 1974.

- N4570 Ptm. Ap.J., 146, 28, 1966.
- N4571 = I3588. P(a) w. N4548 at 27'.
- N4578 = Ho 429a. P. w. Ho 429b at 3'5.
Ptm. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.
- N4575 Coord., Photo. A.J., 76, 755, 1971.
Mag. P.A.S.P., 83, 310, 1971.
- N4579 = M58. Descr.struct. IAU Symp. 44, 56, 1972.
Ptm. 5 col.: A.J., 73, 313, 1968.
Sptm. Observ., 88, 239, 1968.
- N4580 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4589 P(a) w. N4572 at 7'5, N4648 at 22'.
- N4595 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4594 = M104.
Photo. P.A.S.P., 79, 600, 1967. A.J., 74, 515, 1969.
Ptm. Atl. Gal. Austr., 1968. 5 col.: A.J., 73, 313, 1968.
2u: Ap.J.Let., 161, L203, 1970. Nuclei of Galaxies, p.195, 1971.
Spec. Ap.J., 141, 109, 1965.
Sptm. Ap.J., 171, 397, 1972; 175, 649, 1972. Ap.Let., 14, 1, 1973.
Pol. P.A.S.P., 79, 600, 1967.
Rot. vel. A.&A., 8, 364, 1970.
Radio. A.J., 75, 523, 1970. A.&A., 29, 249, 1973.
- N4596 P(a) w. N4608 at 19'.
Sptm. Observ., 88, 239, 1968.
- N4605 Photo. Mem.S.A.Ital., 37, 433, 1966 = Cont. Asiago, No.186.
Ptm., Spec., Rot., mass. Mem.S.A.Ital., 36, 433, 1966.
Rot. vel. A.&A., 8, 364, 1970.
- N4602 P. w. I0804 at ~ 10'.
- N4601, 4603 Pair at 3'3.
- A1238+28A,B = Haro 31A,B (Bol. Tonantzintla No.14, June 1956). Dble system.
Dim., Ptm. A.J., 75, 1143, 1970.
Spec. A.J., 75, 1143, 1970. Ap.J., 181, 15, 1973.
- N4606, 4607 = Ho 436a,b. Pair at 4'0.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4608 P(a) w. N4596 at 19'.
Sptm. Observ., 88, 239, 1968.
- N4612 Ptm. Ap.J., 146, 28, 1966. Bull.A.A.S., 5, 349, 1973.
- N4618 = Arp 23 = VV 73 = Ho 438a = K 349a. P(b?) w. N4625 at 8'3.
Photo., Ptm. Mem.S.A.Ital., 38, No.2, 1967 = Cont. Asiago, No.197. Vistas in Ast., vol.14, p.199,
210, 231, 1972. Sov. A.J., 17, 643, 1974.
- N4603D In Centaurus chain; obj. G-2. See Ap.& Space Sc., 19, 387, 1972.
Photo., Dim., Ptm., Spec. ibid.
- N4625 = I3675 = Arp 23 = Ho 438b = K 349b. P(B?) w. N4618 at 8'3.
Photo., Ptm. Mem.S.A.Ital., 38, No.2, 1967 = Cont. Asiago, No.197. Vistas in Ast., vol.14, p.199,
231, 1972.
- N4620 Ptm. Ap.J., 146, 28, 1966.
- N4621 = M59. Class., Photo. Ap.J., 143, 1002, 1966.
Ptm. 12 col.: Ap.J., 145, 36, 1966. 5 col.: A.J., 73, 313, 1968.
Spec. vel. disp.: IAU Symp. 15, p.112, 1962. Ap.J., 143, 1002, 1966.
Sptm. Observ., 88, 239, 1968. Ap.J., 175, 649, 1972.
Dyn., mass. Ap.J., 139, 284, 1964.
SN1959b. Harvard Ann. No.487, 1939. IAU Cir. No.774, 1939. Mem.S.A.Ital., 32, 249, 1961.
Ann.Rev. Ast. Ap., vol.2, p.248, 1964.
- N4616 In Centaurus chain; obj. G-1. See Ap. & Space Sc., 19, 387, 1972.
Photo., Dim., Ptm., Spec. ibid.
- N4627 = 281 = Ho 442b. P(b) w. N4631 at 2'5.
Ptm. 10 col.: Ap.J., 179, 731, 1973.
Radio. M.N., 144, 149, 1969. Ap.J., 189, 399, 1974.

- N4631 = Arp 281 = Ho 442a = K 350a (N4656 = K 350b). P(b) w. N4627 at 2'5.
Photo. Ap.J., 151, 117, 1968; 194, 559, 1974. A.&A., 2, 1, 1969. Vistas in Ast., vol.14,p.216,1972.
Ptm. 12 col.: Ap.J., 145, 36, 1966.
Spec. Sov. A.J., 13, 593, 1970.
Rot., mass. Ap.J., 140, 1620, 1622, 1964. A.&A., 2, 1, 1969. Vistas in Ast., vol.14,p.239, 1972.
HII reg., dist. modulus: Ap.J., 194, 559, 1974.
Interfer. H α : A.&A., 2, 1, 1969.
HI 21 cm. Ap.J., 150, 8, 1967; 151, 117, 1968. A.&A., 3, 402, 1969.
Radio. Ap.J., 150, 413, 1967. M.N., 144, 143, 1969; 159, 15P, 1972. A.&A., 29, 231, 1973.
- I3687 = DDO 141. HI 21 cm. A.&A., 34, 43, 1974.
- N4622 In Centaurus chain; obj. GO. See Ap. & Space Sc., 19, 387, 1972.
Photo., Dim., Ptm., Spec., ibid.
- N4648 P. w. N4589 at 22'.
- N4632 SN1946b. Z.f.Ap., 49, 202, 1961.
- N4633 = I3688 = Ho 445b = K 351a. P. w. N4634 at 3'5.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4635 Ptm. Isodens.: Ap.J. Suppl., 26, No.230, 1973.
- N4634 = Ho 445a = K 351b. P. w. N4633 at 3'5.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4638 P. w. N4635 at 1'5 (MCG ident. reversed; N4638 = MCG 2-32-188)
Ptm. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.
- N4636 = N4624 ? Ptm. 5 col.: A.J., 73, 313, 1968.
Sptm. Observ., 88, 239, 1968.
SN1939a. Harvard Bull. No.910, 1939. Ann. Rev. Ast. Ap., vol.2, p.248, 1964. A.N., 268, 354, 1968.
- N4645A P. w. N4645B at 5'.
- N4639 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Sptm. Observ., 88, 239, 1968.
- N4637 P. w. N4638 at 1'5.
- N4644, 4644A = K 352. Pair at 1'7. In Haro 32 group (A1241+55A,B)
Photo., Dim., Ptm., Spec. A.J., 75, 1143, 1970. (Obj. 32C,D).
- A1240+30A,B Dble system. Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
- N4646 In Haro 32 group (See A1241+55A,B).
Photo., Dim., Ptm., Spec. A.J., 75, 1143, 1970. (Obj. 32E).
- N4642 Dec. has wrong sign in A.&A., 3, 325, 1971.
- N4645B P. w. N4645A at 5'.
- N4643 Ptm. Bull.A.A.S., 5, 349, 1973. 7 col. Izv. Spets Ast.Obs., 6, 27, 1974.
Sptm. Observ., 88, 239, 1968.
- N4647 = Arp 116 = VV 206 = Ho 448b = K 353a. P(a) w. N4649 at 2'5.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Sptm. Observ., 88, 239, 1968.
Radio. M.N., 167, 251, 1974 (w. N4649).
- N4622A,B Close pair in Centaurus chain; obj. G1, G2 (Ap.Space Sc., 19, 387, 1972).
Photo., Dim., Ptm. Spec., Zs. f.Ap., 67, 306, 1967. Ap. & Space Sc., 19, 387, 1972.
Ptm. Atl. Gal. Austr., 1968.
- N4649 = M60 = Arp 116 = VV 206 = Ho 448a = K 353b. P(a) w. N4647 at 2'5.
Ptm. Ap.J., 139, 384, 1964; 169, 209, 1971. 5 col.: A.J., 73, 313, 1968. 10 col.: Ap.J., 179, 731, 1973. Isodens.: Ap.J. Suppl., 26, No.230, 1973.
Sptm. Ap.J., 139, 532, 1964. Observ., 88, 239, 1968.
Dyn., mass. Ap.J., 139, 284, 1964.
Radio. M.N., 167, 251, 1974 (w. N4647).
- N4651 = Arp 189 = VV 66. QSO 3C 275.1 (z = 0.557) at 3'5 (see Ap.J., 170, 233, 1971).
Photo. Ap.J., 142, 1307, 1965.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec. Ap.J., 170, 233, 1971.
HI 21 cm. Ap.J., 184, 71, 1973.
- N4653 In group w. N4666, 4668.
- N4654 = I3708.
Ptm. 10 μ : Ap.J.Let., 176, L95, 1972. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4656 = K 350b (N4631 = K 350a). P(b) w. N4657.
Photo. Ap.J., 151, 117, 1968; 194, 559, 1974. Astrofizika, 6, 367, 1970.
Ptm. Astrofizika, 6, 367, 1970.
HII reg., dist. modulus. Ap.J., 194, 559, 1974.
HI 21 cm. Ap.J., 151, 117, 1968. A.&A., 3, 402, 1969.
Radio.M.N., 161, 127, 1973.

A1241+55A,B = Mk 220, 221 = I Zw 41 = Haro 32A,B = K 354. (Bol. Tonantzintla, No.14, June 1956).
 Connected pair. Mean vel. for both comp. = +4925±20 (Sources R2, K3, U4).
Photo. A.J., 75, 1143, 1970.
Ptm. A.J., 75, 1143, 1970. Ap.J., 171, 5, 1972. V = 14.20, B-V = 0.41, U-B = -0.23 (log A = 0.82,
 Source DU) for both components.
Spec. A.J., 75, 1143, 1970. A.&A., 30, 21, 1974. Mean vel. for both comp.: Ap.J., 160, 405, 1970.
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972.
HI 21 cm. Mean vel. for both comp.: A.&A., 30, 21, 1974.

N4650 = MCG -7-26-38. In Centaurus chain; obj. G3 (Ap. & Space Sc., 19, 387, 1972).
Photo., Dim., Ptm., Spec. Zs.f.Ap., 67, 306, 1967. Bol.A.A.Argentina, No.16, 10, 1971.
 Ap. & Space Sc., 19, 387, 1972.
Ptm. Atl. Gal. Austr., 1968.

N4657 P(b) w. N4656. For Ref. see N4656.

N4650A In Centaurus chain; Obj. G5 (Ap. & Space Sc., 19, 387, 1972).
 For main Ref. see N4650
Mag., dim. P.A.S.P., 83, 310, 1971 (No.38).

N4659 Ptm. Ap.J., 146, 28, 1966.

A1242+34 = DDO 143 = I Zw 42 = VV 127. v low surf. bright. w. a few emiss. knots.

N4660 Ptm. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.

N4658 P(a) w. N4663 at 7'2.

A1242+28 = Haro 33 (Bol. Tonantzintla, No.14, June 1956).
Descr., dim. Ap.J.Let., 150, L31, 1967. A.J., 75, 1143, 1970.
Photo. P.A.S.P., 84, 592, 1972.
Ptm., Spec. A.J., 75, 1143, 1970. P.A.S.P., 84, 592, 1972. Ap.J., 181, 15, 1973.

I3723 = Mk 441. I3726 at 4'0 sf.

N4663 = I0811. P. w. N4658 at 7'2.

A1242+56 In Haro 32 group. Spec. A.J., 77, 448, 1972.

N4650B In Centaurus chain; obj. G7 (Ap. & Space Sc., 19, 387, 1972).
 For Ref. see N4650.

N4669 In Haro 32 group. (See A1241+55A,B).
Photo., Dim., Ptm., Spec. A.J., 75, 1143, 1970 (obj. 32F).

N4665 = N4664. Sptm. Observ., 88, 239, 1968.

N4666 = Ho 453a. P(a) w. N4668 at 7'3.
Sptm. Observ., 88, 239, 1968.
Rot. vel. A.&A., 8, 364, 1970.
SN1965h. IAU Cir. No.1908, 1965. Ast. Tsirk., No.331, 1965. Sov.A.J., 10, 728, 1966.
Radio. Aust. J. Phys., 21, 193, 1968. A.&A., 31, 447, 1974.

I3730 = Haro 34 (Bol. Tonantzintla, No.14, June 1956).
Dim., Ptm., Spec. A.J., 75, 1143, 1970.

N4670 = Arp 163 = Haro 9 (Bol. Tonantzintla, No.14, June 1956). P(a) w. N4673 at 5'6.
Ptm. A.J., 73, 882, 1968; 75, 1143, 1970. I.R. up.limit: Ap.J.Let., 159, L165, 1970.
Spec. Pub. A.S.Japan, 25, 317, 1973.
Sptm. Ap.J., 181, 633, 1973. Pub.A.S.Japan, 25, 317, 1973.
Radio. A.&A., 15, 110, 1971.

N4668 = Ho 453b. P(a) w. N4666 at 7'3.

N4673 P(a) w. N4670 at 5'6.

N4675 In Haro 32 group (See A1241+55A,B).
Photo., Dim., Ptm. A.J., 75, 1143, 1970. (Obj. 32G).
Spec. A.J., 77, 448, 1972.

N4674 SN1907a. Zs. f. Ap., 49, 202, 1961.

A1243+71 = Mk 223 = VII Zw 483. $m_p = 15.3$

N4676A,B = I0819, 820 = Arp 242 = VV 224 = Ho 459a,b = K355. P(b) at 0'6.
 Long diff. filam. on opposite sides.
Photo. A.&A., 28, 379, 1973.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
Spec. P.A.S.P., 84, 851, 1972. Ap.J., 187, 219, 1974.
Dyn., encounter model: Ap.J., 178, 623, 1972.
Radio. A.&A., 28, 379, 1973. Nature, 241, 260, 1973.

N4686 In Haro 32 group (See A1241+55A,B).
Photo., Dim., Ptm., Spec. A.J., 75, 1143, 1970 (obj. 32H).

A1244+26 In foreground of Coma Cl.
Spec. A.J., 77, 4, 1972.
Sptm. Ap.J., 181, 633, 1973.

A1244+51 = Haro 36 (Bol. Tonantzintla, No.14, June 1956).
Descr., Photo. Ap.J.Let., 150, L31, 1967.
Dim., Ptm., Spec. A.J., 75, 1143, 1970.

N4687 = Mk 442. Spec. Ast. Tsirk., No.798, 1973. Astrofizika, 10, 315, 1974.

N4688 = Ho 461a. P. w. small Im (Ho 461b) at 6'8.
Photo., Spec. A.J., 72, 912, 1967.
Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
SN1966b. IAU Cir. No.1950, 1966. Ast. Tsirk., Nos.357, 366, 1966; 406, 1967. A.J., 72, 912, 1967.

N4689 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

A1245+27A In Coma Cl. see BGC

N4695 In Haro 32 group (See A1241+55A,B).
Photo., Dim., Ptm., Spec. A.J., 75, 1143, 1970 (obj. 32J).

N4692 I823 = * at 1'3 sp.

N4691 Class. Astrofizika, 3, 427, 1967.
Descr., Phys. data: A.J., 79, 1242, 1974.
Ptm. Bull.A.A.S., 5, 349, 1973.
Spec., Sptm., Pop.model: A.&A., 37, 7, 1974.

N4694 Ptm. Ap.J., 146, 28, 1966.
Sptm. Observ., 88, 239, 1968.

A1245+24B In Coma Cl (A1246A in BGC)

A1246+54 In Haro 32 group. Spec. A.J., 77, 448, 1972.

N4697 P(b) w. anon. SAB(s)cp at 5'9.
Class., Photo. Ap.J., 143, 1002, 1966.
Spec., vel. disp.: IAU Symp. 15, p.112, 1962. Ap.J., 143, 1002, 1966.
Sptm. Ap.J., 175, 649, 1972.
Dyn., rot., mass. Ap.J., 139, 284, 1964. Comm. Padova, No.98, 1972.

N4696 = PKS 1245-41. Brightest in Centaurus Cl.
Photo. Observ., 83, 36, 1963. M.N., 131, 351, 1966.
Ptm. P.V.: bol.A.A.Argentina, No.16, 17, 1971. B.V.: Ap.J., 178, 1, 1972.
Spec. Ap.J., 172, 37, 1972.
Radio. Observ., 83, 36, 1963.
X-rays. from Cl.: Ap.J.Let., 173, L99, 1972; 185, L13, 1973; 193, L57, 1974.

N4707 = DDO 150 = I Zw 43. Many emiss. knots, sN or *.

N4704 Mk 228 at 2'2s.

A1246+34 = Mk 444 = Haro 37 (Bol. Tonantzintla, No.14, June 1956).
Dim., Ptm., Spec. A.J., 75, 1143, 1970.
HI 21 cm. A.&A., 29, 217, 1973.

I3804 = N4711.

N4699 Rot. vel. A.&A., 8, 364, 1970.
SN1948a. Zs.f.Ap., 49, 202, 1961.

A1246+47 = Mk 229. N4741 at 3'2 sf.

N4700 P(a) w. anon. Sp? at 10'.

A1246-41C,A In Centaurus Cl. Comp.A (= Helwan 274) list as A1248A in BGC.

A1246-09 = HA 88, 2 New 3. (A1247 in BGC).

A1246-41B In Centaurus Cl. Listed as A1248B (= Helwan 276) in BGC.

N4708 = Ho 463a. (Ho 463b at 0'4 is a condens. in the gal.).

N4712 = Ho 468b. P(a) w. N4725 at 12'.

N4706 In Centaurus Cl.

N4710 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

A1247+27 In Coma Cl. (A1246B in BGC).

N4709 In Centaurus Cl.

N4713 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

A1247-41 In Centaurus Cl. Listed as A1248C (= Helwan 280) in BGC.
 N4719 = Mk 446. Spec. Astrofizika, 10, 315, 1974 (weak Seyfert N). Ast. Tsirk., No.798, 1973.
 N4725 = Ho 468a. P. w. N4712 at 12'. Note corr. to Dec. in A.&A.Suppl., 3, 325, 1971.
Photo. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.396, 1965.
Ptm. 5 col.: A.J., 73, 313, 1968. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
SN1940b. Ann. Rev. Ast. Ap., vol.2, p.249, 1964. Supernovae & SN Remnants, Ap. & Space Sc. Lib.,
 vol.45, p.207, 1974.
SN1969h. IAU Cir. No.2155, 1969. P.A.S.P., 82, 736, 1970. (w. Photo.). Ap.J., 185, 303, 1973.
 N4728 = Ho 469a. P. w. Ho 469b,c at 2'2 and 3'6.
 N4724 = Ho 470b. P. w. N4727 at 1'.
 N4727 = Ho 470a. P. w. N4724 at 1' and N4726 = N4740 at 11'.
SN1965b. IAU Cir. No.1887, 1965. Ast. Tsirk. No.315, 1965.
 N4731 = Ho 472a. P. w. Ho 472b, dIBm, at 10'5.
Photo. Vistas in Ast., vol.14, p.218, 1972.
 A1248+28 In Coma Cl. Listed as A1249 in BGC.
Photo. Galileo Conf. Cosmology, p.132, 1966.
Spec. Ap.J., 181, 15, 1973 (obj. CT51).
SN1961d. P.A.S.P., 74, 215, 1962. "Stellar Structure", Stars and Stellar Systems, vol.VIII, p.396,
 1965. Galileo Conf. Cosmology, p. 132, 1966.
 N4736 = M94. Photo. Ap.J., 147, 477, 1967; 188, 3, 1974. A.J., 72, 1032, 1967. A.&A., 15, 110, 1971.
 IAU Symp. 44, p.56, 1972. IAU Symp. 58, p.431, 1974.
Ptm. U,B,V: Ap.J., 143, 187, 1966; 147, 407, 1967. A.J., 72, 1032, 1967.
 5 col.: A.J., 73, 313, 1968. I.R., 1-20μ: Ap.J., 143, 187, 1966; Ap.J.Let., 159, L165, 1970;
 I61, L203, 1970; 176, L95, 1972.
Spec. Ap.J., 147, 407, 1967; 188, 3, 1974.
Sptm. Far U,V: N.A.S.A., SP. 310, p.559, 1972.
Rot., mass. J. Observ., 48, 247, 1965 = Pub.O.H.P., 8, No.16, Ap.J., 147, 407, 1967; 188, 3, 1974.
 A. & A., 8, 364, 1970. IAU Symp. 58, p.431, 1974.
HI 21 cm. Ap.J., 150, 8, 1967. IAU Symp. 58, p.408, 1974.
Radio. A.&A., 15, 110, 1971; 29, 231, 1973. A.J., 78, 18, 1973.
 N4735 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
 N4733 = Ho 473a. (Ho 473b at 0'9 is a *).
 A1248-40 In Centaurus Cl. Listed as A1248D (= Helwan 288) in BGC.
 A1249-41 In Centaurus Cl.
 N4747 = Arp 159 = Ho 468c. P. w. N4725 at 24'. F extens. nf.
Sptm. Ap.J., 181, 633, 1973.
HI 21 cm. A.J., 79, 767, 1974.
 N4749 Note corr. to NGC R.A.
 N4743, 4744 In Centaurus Cl. N4743 = MCG -7-27-5.
 N4754 = Ho 478b = K 356a. P(a) w. N4762 at 10'5.
 N4753 Note corr. to Dec. sign in A. & A.Suppl., 3, 325, 1971.
Class., Descr., Phys. data: Astrofizika, 3, 427, 1967. A.J., 79, 1242, 1974.
Photo. Mem.S.A.Ital., 42, 145, 1971 = Cont. Asiago No.254.
Ptm. 11 col.: A.&A., 29, 77, 1973. Bull.A.A.S., 5, 349, 1973. U,B,V, surf. ptm.: Prob. Cosmic Phys.
 (USSR), 8, 187, 1973. Isodens.: A.J., 79, 1242, 1974.
Spec. A.&A., 29, 77, 1973. Source G1 (A.J., 72, 730, 1967) rejected.
Rot., mass. A.&A., 29, 77, 1973.
SN1965i. IAU Cir., Nos.1912, 1914, 1965. P.A.S.P., 77, 469, 1965. Sov.A.J., 10, 728, 1966.
 Mem.S.A.Ital., 42, 145, 1971 = Cont. Asiago, No.254.
Radio. A.J., 75, 523, 1970.
 N4757 P(a) w. N4760 at 12'.
 N4762 = Ho 478a = K 356b. P(a) w. N4754 at 10'5.
Spec. vel. disp.: IAU Symp. 15, p.112, 1962.
Rot. vel. A.&A., 8, 364, 1970. Comm.Padova, No.98. 1972.
 N4760 = PKS 1250-10. P(a) w. N4757 at 12'.
Spec. Aust. J. Phys., 25, 233, 1972.
Radio. M.N., 152, 439, 1971. Ap.J., 189, 399, 1974.
 N4774 = I Zw 45. Ring Gal. Dim. Ap.J., 194, 569, 1974.
Photo. Observ., 90, 153, 1970.
 N4779 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
 N4780 = Ho 482a. P. w. Ho 482b at 2'.
 N4789A = DDO 154. P. w. N4789 at 5'. HI 21 cm. A.&A., 34, 43, 1974.
 N4781 = Ho 483a. P(a) w. N4784 at 5'7, N4790 at 18'5.

N4789 P. w. N4789A at 5', N4787 at 3' p.

N4782, 4783 = 3C 278 = VV 201 = Ho 485a,b. P(b) at 0'7, connected.
Descr., class. Ap.J., 140, 35, 1964.
Photo. Ap.J., 140, 1462, 1964.
Ptm. Isoph.: Ap.J., 140, 1462, 1964. U.B.V.R: Ap.J., 178, 25, 1972; 183, 731, 1973. $V = 11.15$,
 $B-V = 1.01$, $U-B = 0.61$ ($\log A = 1.35$, source S) for both comp.
Spec. Ap.J., 191, 55, 1974.
Mass. Ap.J., 140, 1462, 1964.
SN1956b. P.A.S.P., 82, 736, 1970 (w. Photo.)
Radio. A.J., 72, 230, 1967; 73, 1, 1968; 76, 211, 1971. Sov.A.J., 13, 28, 1969. Ap.J., 193, 303,
 1974. M.N., 167, 251, 1974.

N4784 = Ho 483b. P. w. N4781 at 5'7.

N4793 = 5C 4.022. Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4790 P(a) w. N4781 at 18'5.

N4809, 4810 = Arp 277 = VV 313 = Ho 486a,b = K 358. P(b) at 0'7. NGC numbers interchanged in UGC and MCG.

N4792, 4794 Pair at 7'.

N4795 = K 359a.

A1252+00 = HA 88,2 New 4. Listed as A1253 in BGC.

N4807, 4807A Pair at 1'. In Coma Cl. Spec. A.J., 76, 409, 1971.

N4802 = N4804.

N4808 P(a) w. anon. SAB(s)d at 17'5.
Mass. Bull.A.A.S., 1, 186, 1969.

A1253+27 = Mk 53. In Coma Cl. (w. Mk 55, 56, 57, 58, 60).
Photo. Astrofizika, 4, 475, 1968.

N4819, 4821 = Ho 490a,b. Pair at 1'8. In Coma Cl.

A1254+57 = Mk 231 = VII Zw 490. Class 1 Seyfert N. Misident. as Mk 230 in UGC.
Photo. Ap.J.Let., 173, L109, 1972.
Ptm. I.R. low. limits: Nature, 238, 263, 1972.
Spec. Ap.J.Let., 173, L109, 1972; 176, L1, 1972. Ap.J., 192, 581, 1974. Bull.A.A.S., 5, 320, 1973.
 Absorp. lines (incl. very strong Na I D line) at $V(\text{abs}) = V(\text{em}) - 4000 \text{ km s}^{-1}$.

N4826 = M64.
Photo. Ap.J., 141, 885, 1965. A.J., 72, 1032, 1967. Sov.A.J., 17, 643, 1974.
Ptm. A.J., 72, 1032, 1967. Sov.A.J., 17, 643, 1974.
I.R. 2-10 μ : Ap.J.Let., 161, L203, 1970; 176, L95, 1972.
Spec. Ap.J., 141, 885, 1965. Bull.A.A.S., 4, 332, 1972.
Sptm. Ap.J., 186, 21, 1973.
Rot., mass. Ap.J., 141, 885, 1965.
HII reg. Bull.A.A.S., 6, 343, 1974.
Radio. A.&A., 29, 231, 1973.

A1254+32 = Mk 54. In Zwicky 1971. Listed as A1255 in BGC.

N4825 In a group w. N4820, 4823, 4829 and others SO sp.

N4837 = I ZW 46 = UGC 8068 = MCG 8-24-11, 12. Connected pair. Total $m_p = 14.4$. V is for mean of both comp.
Spec. Ap.J., 160, 405, 1970. (Gives V for each comp. and link.) P

A1255+27A = Mk 55. In Coma Cl.

N4841A,B = Ho 492a,b = K 361. Pair at 0'7.
Ptm. Isodens.: Ap.J.Suppl., 26; No.230, 1973.

N4842A,B Pair at 0'5. In Coma Cl.

A1255+59 = Mk 232. Radio. Izv. V.U.Z. Radiofizika, 16, 1342, 1973.

N4835 P(a) w. vs dIBm at 1'7.
Spec. A.J., 72, 821, 1967.

A1255+28 SN1963c. and Photo. P.A.S.P., 76, 325, 1964. HAC No.1585, 1963.

A1255+27B = III Zw 68, $m_p = 15.2$. In Coma Cl.

A1255+15 = DDO 157. UGC Dxd should read 2.0:: x 0.8::.

N4849 = I3935 = Ho 495a. P. w. I0838 (= Ho 495b) at 1'9. Misident. in CGCG.

N4850 Ptm. P,V: A.J., 71, 635, 1966. Ap.J., 158, 657, 1969.

A1256+14 = DDO 155 = GR 8 (A.J., 61, 69, 1956), dwarf in Virgo Cl.
Photo. Ap.J., 148, 719, 1967. Ann.Rev.Ast.Ap., vol.9, p.35, 1971. P.A.S.P., 86, 645, 1974.
Ptm. Ap.J., 148, 719, 1967.
Spec., HII reg. P.A.S.P., 86, 645, 1974.

A1256+27A,B = Mk 56, 57. In Coma Cl.
 N4853 = II Zw 67. In Coma Cl.
Ptm. P,V: A.J., 71, 635, 1966.
 A1256+09 Ptm. Isodens.: Ap.J.Supp1., 26, No.230, 1973.
 N4854 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969. Isodens.: A.J., 79, 671, 1974.
 I3946 In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966. Ap.J., 158, 657, 1969.
 I3947 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.
 I3949 In Coma Cl. Photo. P.A.S.P., 80, 424, 1968.
Ptm. V: P.A.S.P., 80, 424, 1968. Ap.J., 158, 657, 1969.
 N4858 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.
 N4860 In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966.
 N4861 = Arp 266 = I Zw 49 = K 362. I3961 = Mk 59 is B emiss. patch at SW end.
Photo. Astrofizika, 5, 113, 1969.
Ptm. U,B,V: Ap.J., 171, 5, 1972.
Spec., Rot. A.&A., 30, 21, 1974.
Sptm. Ap.J., 171, 5, 1972. IAU Symp. 44, p.145, 1972.
HI 21 cm. A.&A., 30, 21, 1974.
 A1256+27C = Mk 58 = RB No.219 (A.J., 72, 398, 1967). In Coma Cl.
Ptm. V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
 I3955, 3959, 3960 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.
 I3960 Listed as I3960A in A.&A. Suppl., 12, 89, 1973.
 I3960A is 0'5 nf (V = 6868±65, Source B).
 N4864 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.
 I3963, N4867 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.
 N4865 In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966; 73, 442, 1968. Ap.J., 158, 657, 1969.
 N4869 = 5C 4.81. In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966. Ap.J., 158, 657, 1969.
Radio. A.&A., 31, 223, 1974.
X-rays. Ap.J., 178, 309, 1972.
 I3976, N4871, I3973 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.
 N4873 In Coma Cl. Photo. Ap.J., 143, 192, 1966.
Ptm. V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
 N4872 In Coma Cl. Photo. Ap.J., 143, 192, 1966.
Ptm. P,V: A.J., 71, 635, 1966. Ap.J., 158, 657, 1969.
 N4874 = 5C 4.85. In Zwicky 1971. In Coma Cl.
Photo. Ap.J., 143, 192, 1966; Ap.J.Let., 169, L3, 1971. P.A.S.P., 81, 224, 1969.
 Galileo Conf. on Cosmology, p.133, 1966.
Ptm. P,V: A.J., 71, 635, 1966. V: A.J., 73, 442, 1968; 75, 695, 1970. Ap.J., 158, 657, 1969.
Isodens.: Ap.J.Let., 169, L3, 1971. A.J., 79, 671, 1974.
Sptm. D. Wells, Univ. of Texas Dissert., Austin, 1972, unpubl.
 SN1968b. IAU Cir. No.2056, 1968. Ast. Tsirk., No.426, 1968. P.A.S.P., 81, 224, 1969.
Radio. A.&A., 31, 223, 1974.
X-rays. Ap.J., 178, 309, 1972. Bull.A.A.S., 4, 412, 1972.
 N4875, 4876 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.
 I3998, N4883 In Coma Cl. Ptm. V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
 Mag. and colors reduced using dim. on PSS (I3998: 0'55 x 0'35; N4883: 0'7 x 0'5).
 N4881 In Coma Cl. Ptm. P,B,V: A.J., 71, 635, 1966; 73, 442, 1968; 77, 642, 1972. Ap.J., 158, 657, 1969.
Isodens.: A.J., 79, 671, 1974.
 N4886 = N4882. In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966; 73, 442, 1968. Ap.J., 158, 657, 1969.
 N4880 = Ho 497a. (Ho 497b at 1'7 is a *).
 I4011, 4012 In Coma Cl. Ptm. V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
 Mag. and colors reduced using dim. on PSS (I4011: 0'40 x 0'35; I4012: 0'35 x 0'30).
 N4889 = N4884. Brightest in Coma Cl. Dim. Ap.J., 173, 485, 1972.
Photo. P.A.S.P., 80, 424, 1968. Ap.J.Let., 169, L3, 1971; A.J., 79, 671, 1974.
Ptm. Ap.J., 139, 284, 1964. P,V: A.J., 71, 635, 1966. U,B,V: A.J., 73, 442, 1968; 77, 642, 1972.
 P.A.S.P., 80, 424, 1968. Ap.J., 158, 657, 1969; 173, 485, 1972; 178, 1, 1972. Ap.Let., 5, 219,
 1970. Isodens.: Ap.J.Let., 169, L3, 1971. A.J., 79, 671, 1974.
Dyn., mass. Ap.J., 139, 284, 1964.
X-rays from Cl. Ap.J., 146, 955, 1966; 183, 15, 1973. Ap.J.Let., 167, L81, 1971; 173, L99, 1972;
 183, 157, 1973; 185, L13, 1973; 193, L57, 1974. Nature, 231, 107, 1971. Bull.A.A.S., 6, 429,
 437, 1974.

A1257+28 = Mk 60 = RB No.82 (A.J., 72, 398, 1967). In Coma Cl.
Ptm. V: Ap.J., 158, 657, 1969.

N4895A 2'7 sp N4895. In Coma Cl.

I4021 In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966; 73, 442, 1968. Ap.J., 158, 657, 1969.

N4894 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.

N4898 Dble syst., in contact. In Coma Cl. Photo. P.A.S.P., 80, 424, 1968.
Ptm. V: P.A.S.P., 80, 424, 1968. Ap.J., 158, 657, 1969.

N4895 In Coma Cl. Photo. P.A.S.P., 80, 424, 1968.
Ptm. P,V: A.J., 71, 635, 1966; 73, 442, 1968. P.A.S.P., 80, 424, 1968. Ap.J., 158, 657, 1969.
Isodens.: A.J., 79, 671, 1974.

I4026 In Coma Cl. Ptm. V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
 Mag. and Colors reduced using dim. on PSS (0'5 x 0'4).

A1258-06 $m_p = 14.5$. SN1970c. A.J., 76, 756, 1971.

N4887 SN1964d. IAU Cir. No.856, 1964. HAC No.1635, 1964. Tokyo Ast. Bull., No.176, 1967.

N4896 In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966.

I4040 In Coma Cl. Photo. P.A.S.P., 80, 424, 1968.
Ptm. V: P.A.S.P., 80, 424, 1968. Ap.J., 158, 657, 1969.

N4906 In Coma Cl. Ptm.V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
 Mag. and colors reduced using dim. on PSS (0'6 x 0'5).

I4041 In Coma Cl. Ptm. V: Ap.J., 158, 657, 1969.

I4042 In Coma Cl. Ptm. V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
 Mag. and colors reduced using dim. on PSS (0'6 x 0'5).

I4045 In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966; 73, 442, 1968. Ap.J., 158, 657, 1969.

N4908, I4051 In Coma Cl. Ptm. P,V: A.J., 71, 635, 1966; 73, 442, 1968. Ap.J., 158, 657, 1969.
Isodens.: A.J., 79, 671, 1974.

N4911 = Ho 499a. P. w. s. anon. (Ho 499b) at 0'6. In Coma Cl.

N4915 P(a) w. N4918 at 6'3, and A1258-04 (= DDO 160) at 13'.

A1258-04 = DDO 160. 13' sf N4915.

N4922 = K 363. Dble syst. in Coma Cl. Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.

N4921 In Coma Cl. Ptm. V: A.J., 73, 442, 1968. Ap.J., 158, 657, 1969.
Isodens.: A.J., 79, 671, 1974.

N4926A 3'4 nf N4926. In Coma Cl.

N4928 SBc sp (= MCG -1-33-71) at 23'5 sp.

I0844 P(a) w. N4936 at 12'7.

N4933A,B = Arp 176 = Ho 502a,b. Interacting pair at 0'8. P(a) w. anon. SB(r)O/a at 4'3.

N4944 SN1973f. IAU Cir. No.2521, 1973.

N4936 P(a) w. I0844 at 12'7.

N4939 Spec. Ap.Let., 4, 89, 1969 (em. knot att.to N w. $\Delta V = -700 \text{ km s}^{-1}$). Bull.A.A.S., 4, 237, 1972.
SN1968x. IAU Cir. No.2116, 1968. Ast. Tsirk. No.491, 1968.
SN1973? IAU Cir. No.2538, 1973.
Radio. A.&A., 29, 249, 1973.

A1301-03 Dwarf anon. (= A1302 in BGC).

N4948 = Ho 505a. (Ho 505b at 1' sf is a dble *, but vF comp. at 1'1 np). N4948A at 12'5.sf.
 Another vF SB(s)dm at 5'5 nf.

N4948A = DDO 162 = Ho 506a. (Ho 506b at 3'3 sf, not found). N4948 at 12'5.

N4945 = PKS 1302-49.
Descr., Prec. coord. Observ., 87, 169, 1967. Vistas in Ast., vol.14, p.210, 1972.
Photo. Ap.J., 139, 899, 1964. Observ., 87, 169, 1967.
Ptm. Ap.J., 139, 899, 1964. Atl.Gal.Austr., 1968.
Spec. Ap.J., 172, 37, 1972. Discordant vel. Source N1 (A.J., 72, 821, 1967) rejected.
Sptm. Molec. abs. OH, H₂CO, IAU Cir. No.2552, 1973. Ap.Let., 15, 211, 1973. Nature, 247, 526, 1974.
Dyn., mass. Ap.J., 139, 899, 1964.
Interfer. Ha: Bol.A.A.Argentina, No.14, 90, 1968. A.&A., 12, 379, 1971.
HI 21 cm. absorpt. Ap.Let., 15, 211, 1973.
Radio. Aust. J. Phys., 16, 360, 1963. M.N., 152, 439, 1971.

N4957 P. w. N4961 at 12'5.

A1302+32 Ptm. Isodens.: Ap.J.Suppl., 26, No.230, 1973.
 N4958 P. w. N4948A at 13'5 and N4948 at 14'.
 N4961 P(a) w. N4957 at 12'5.
 I4182 Mag., vel. "Supernovae & SN Remnants", Ap.& Space Sc.Lib., vol.45, p.15, 1974.
SN1937c. P.A.S.P., 75, 256, 1962. A.&A., 20, 79, 1972. M.N., 181, 71, 1973. Ap.J., 182, 225, 1973;
 192, 657, 1974. Ann. Rev. Ast. Ap., vol.2, p.248, 1964. "Supernovae & SN Remnants",
 Ap. & Space Sc. Lib., vol.45, p.15, 1974.
 I4189 $m_p = 12$ in MCG, vol.II, 1964. $m_p = 14.5$ in CGCG, vol.III, 1966.
 A1304+28 SN1962a and Photo. P.A.S.P., 75, 236, 1963. A.J., 72, 1366, 1967.
 A1304+67 = VII Zw 499 = DDO 165. Resolved, $m_p = 14.1$.
 I0850 SN1956d and Photo. P.A.S.P., 84, 844, 1972.
 N4975 SN1968?. Inf.Bull.V.S.No.785, 1973. Supernovae & SN Remnants, Ap.& Space Sc.Lib., vol.45, p.51, 1974.
 N4976 Ptm. Atl.Gal.Austr., 1968.
 N4981 SN1968i. IAU Cir. No.2070, 1968. Ast. Tsirk., Nos.469, 470, 1968.
 A1306+62 $m_p = 12$ in MCG, vol.I, 1962. $m_p = 13.8$ in CGCG, vol.IV, 1962.
 A1307-15 Listed as A1306 in BGC. 21' sf N4984.
 A1307-07 SN1954h. and Photo. P.A.S.P., 82, 736, 1970.
 N5005 = Bol.2 1308+37.
Ptm. Mem.S.A.Ital., 38, 189, 1967 = Cont. Asiago, No.194. 5 col.: A.J., 73, 313, 1968.
Dyn., rot., mass. A.&A., 8, 364, 1970. Ap.J., 184, 735, 1973.
 N5004, 5004A Pair at 4', in Coma Cl.
 A1308+03 (A1309 in BGC). SN1959c. A.J., 67, 118, 1962. HAC No.1440, 1959. IAU Cir. No.1683, 1959.
 A1309+84 = VII Zw 501. F attached comp., total $m_p = 14.5$.
Spec. A.&A., 33, 113, 1974 (FeII emiss.).
 N5012 P(a) w. anon. Pec. or Sm at 15'5.
 N5011A Mag., dim. P.A.S.P., 83, 310, 1971.
 A1309+21 = 4C 21.39 = PKS 1309+21.
Spec. Ap.J.Let., 160, L79, 1970.
 A1309-17 $m_p = 12$ in MCG, vol.IV, 1968.
 A1309+26 Low vel. obj. in foreground of Coma Cl.
Spec. A.J., 76, 409, 1971.
 A1310-32 Listed as A1310 in BGC where log D, log R, log D(0) were in error.
 N5018, 5022 Pair at 7'2.
 A1310+36 = DDO 166 = Holmberg VIII (1958). Comp. of N5033.
 N5033 = Bol.2 1311+36. Photo. P.A.S.P., 82, 736, 1970. A.J., 76, 22, 1971.
Ptm. Bull. Ap. Inst. Duschambe, No.48, 22, 1966.
Spec. A.J., 76, 22, 1971.
Rot. vel. A.&A., 8, 364, 1970. A.J., 76, 22, 1971.
SN1950c. P.A.S.P., 82, 736, 1970.
 N5030 In N5044 group.
 A1311+35 = I Zw 53. $m_p = 16.7$
 A1311+42 Listed as N5003 in BGC, but N5003 is at $13^h06.4,+44^{\circ}00(= \text{MCG } 7-27-33 = \text{UGC } 8228)$.
 See W.Herschel, Scientific Papers (ed. Dreyer, 1912), vol.I, p.354, where $\Delta R.A. = 7^m26^s$.
 N5035 In N5044 group.
 A1312+46 = DDO 168. HI 21 cm. A.&A., 34, 43, 1974.
 N5037 In N5044 group.
 A1312+35 = Mk 450. Spec. Astrofizika, 10, 315, 1974.
 A1312+55 = Mk 247. Sptm. Astrofizika, 7, 389, 1971.
 N5044 Brightest of a group.
Diam. Ap.J., 173, 485, 1972.
Ptm. B,V,R: Ap.J., 183, 731, 1973.
 N5046, 5047, 5049. In N5044 group.

N5055 = M63.
Photo. Ap.J., 148, 231, 1967. L'Astronomie, 86, 137, 1972. A.&A., 29, 231, 1973. Mem.S.A.Ital., 44, 65, 1973 = Cont. Asiago No.284.
Ptm. 5 col.: A.J., 73, 313, 1968. U.B.V: Ap.J., 143, 187, 1966.
I.R. 1-3 μ : Ap.J., 143, 187, 1966. Ap.J.Let., 161, L203, 1970.
Sptm. Ap.J., 163, 249, 1971.
Rot. mass. A.&A., 8, 364, 1970. Ap.J., 184, 735, 1973.
HI 21 cm. Ap.J., 150, 8, 1967.
SN1971i. IAU Cir. Ncs. 2330, -32, -33, -34, -36, -38, -41, -47, 1971. Ast. Tsirk. Nos.630, 648, 1971. Yamamoto Cir. Nos. 1739, -40, 1971. Pub.A.S.Japan, 23, 593, 1971. A.&A., 17, 146, 1972; 22, 317, 1973. L'Astronomie, 86, 137, 1972. P.A.S.P., 85, 321, 1973. Ap.J., 185, 303, 1973. Mem.S.A.Ital., 44, 65, 1973. Bull.A.A.S., 4, 320, 1972.
Radio. Ap.J., 144, 553, 1966; 183, 791, 1973. A.J., 78, 18, 1973. A.&A., 29, 231, 1973; 31, 447, 1974.

A1313+07 = 4C 07.32 = PKS 1313+07.

N5054 P. w. s. anon. SBm? sp at 2'7 n.

N5068 HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969; 194, 559, 1974.
Dist. modulus: Ap.J., 194, 559, 1974.
Radio. Aust. J.Phys., 19, 883, 1966.

N5077 = Ho 514b. P(a) w. N5079 at 3'0. Brightest of a group.
Ptm. B,V,R: Ap.J., 183, 731, 1973.
Spec. Ap.J.Let., 164, L35, 1971.
Radio. A.J., 75, 523, 1970. Ap.Let., 6, 49, 1970. Ap.J., 157, 481, 1969; 189, 399, 1974.
 IAU Symp. 44, p.222, 1972.

N5079 = Ho 514a. P(a) w. N5077 at 3'0, N5076 at 3'2.

N5078 P(a) w. I0879 at 2'3.

N5088 = No 515a. (Ho 515b at 3'7 is a *). In N5077 group.

N5082 SN1958, not confirmed, rejected from lists (A.J., 76, 756, 1971.). One pl. only, see Cat. of SN, Pub. Ast. Obs. Warsaw, vol.15, 1968.

N5098 = B2 1317+33. Dble system. $m_p = 15.0$.

N5090, 5091 Pair at 1'3.

I0883 = Arp 193 = I Zw 56 = B2 1318+34A. B cent. reg. 2 F jets SW and SE.
Photo., Spec. Ap.J., 140, 1617, 1964.

N5102 Ptm. Atl.Gal.Austr., 1968.
HI 21 cm. Bull.A.A.S., 6, 332, 1974.

N5107, 5112 Pair at 13'5.

N5127 = B2 1321+31A.
Radio. Ap.J., 189, 399, 1974.

N5144 = Mk 256 = VII Zw 511. Distorted w. condens. and jets.

I4237 Pair w. N5134 at 10'7. SN1962h. IAU Cir. No.1802, 1962.

N5128 = Arp 153, Centaurus A.
Descr., class. Ap.J., 140, 35, 1964. P.A.S.P., 80, 129, 1968. Ap.J.Let., 170, L7, 1971.
 Bull.A.A.S., 3, 444, 1971.
Photo. Pub.N.A.R.O., 1, 251, 1963. Lowell Obs. Bull., VI, No.123, 1964. Ap.J., 140, 44, 1964.
 Ap.J.Let., 170, L7, 1971. Ap.Let., 8, 57, 1971.
Ptm. Atl. Gal. Austr., 1968. U.B.V: Ap.J.Let., 170, L7, 1971. Ap.J., 178, 25, 1972.
Star Seq. near gal.: Ark. f. Ast., 5, 249, 1969. I.R. 1-10 μ : Ap.J.Let., 170, L7, L15, 1971; 191, L19, 1974.
Spec. Nature, 224, 253, 1969. Ap.J.Let., 170, L7, 1971.
 Pol. Lowell Obs. Bull., VI, No.123, 1964.
 Mass of N. Ap.J.Let., 170, L7, 1971.
HII reg. Zs. f. Ap., 51, 64, 1960.
Interfer. Ho: Nature, 224, 253, 1969. Inf. Bull.South. Hemisp., No.14, 32, 1969.
HI 21 cm. Absorp. and emiss. Ap.J.Let., 161, L10, 1970. Ap.Let., 8, 57, 1971. IAU Symp. 44, p.12, 1972. A.&A., 31, 283, 1974.
Radio. Ap.J., 140, 44, 1964; 147, 25, 1967; 154, 423, 1968; 157, 481, 1969. Ap.J.Let., 170, L11, 1971; 194, L35, 1974. Proc. A.S.Austr., 1, 229, 1969. A.J., 76, 211, 1971. M.N., 152, 439, 1971; 169, 15P, 1974. Nature, Phys. Sc., 245, 83, 1973. Bull.A.A.S., 6, 441, 1974.
X-rays. Ap.J.Let., 161, L1, 1970; 165, L49, 1971; 171, L45, 1972; 173, L99, 1972. Ap.J., 180, 715, 1973; 183, 357, 1974. Bull.A.A.S., 3, 444, 456, 1971.

N5134 P(a) w. I4237 at 10'7.

N5141 = 4C 36.24 = B2 1322+36 = K 373a. Pair w. N5142 at 2'3.
Spec. Ap.J.Let., 182, L13, 1973. M.N., 158, 277, 1972.

N5142 = Mk 452 = K 373b. Pair w. N5141 at 2'3.

N5135 P(a) w. I4248 at 13'5.

A1323+57 = Mk 66. Spec. Ap.J., 159, 405, 1970.

- N5140 Mag. and colors reduced using dim.on PSS (1'7: x 1'5:).
- A1326+31 Rej. ident. for 4C 31.42. The radio S. is 5's. Spec. Ap.J.Let., 148, L53, 1967.
- N5164 = K 376.
- N5169, 5173 Pair at 5'5.
- N5161 HII reg. Atlas and Catalogue, Univ. Washington, Seattle 1966.
SN1974b. IAU Cir. No.2640, 1974. P.A.S.P., 87, 401, 1975 (w. Photo.)
- A1327+45 = DDO 176. HI 21 cm. A.&A., 34, 43, 1974.
- N5204 In M101 group.
Photo. Ap.J., 194, 223, 1974.
Mass., HII reg., dist. modulus. Ap.J., 194, 223, 1974.
- N5194, 5195 = M51 = Arp 85 = VV 1 = Ho 526a,b = K 379. P(b) at 4'8, connected with outer streamers.
Descr., Struc., Prop. (N5195). Ap.J., 146, 593, 1966. P.A.S.P., 85, 815, 1973. A.J., 79, 1242, 1974.
Diam. N. (N5194). Ap.J.Let., 155, L129, 1969.
Photo. Ap.J., 140, 1445, 1964; 194, 559, 1974. Ap.J.Suppl., 27, No.251, 1974. P.A.S.P., 78, 495, 1966; 79, 600, 1967; 85, 815, 1973; 86, 92, 1974. Observ., 88, 91, 1968. A.J., 74, 515, 1969.
Ap.Let., 4, 117, 1969. A.&A., 1, 479, 1969; 3, 418, 1969; 17, 468, 1972. Izv. Crimea Obs., 43, 101, 1971. IAU Symp. 29, p.434, 1968. IAU Symp. 38, pp.75, 79, 1970. IAU Symp. 44, p.56, 1972.
IAU Symp. 58, p.354, 1974.
Ptm. Pg Isoph.: P.A.S.P., 78, 125, 1966. B-V maps: P.A.S.P., 86, 92, 1974. 12 col.: Ap.J., 145, 36, 1966. 5 col.: A.J., 73, 313, 1968. 9 col.: Izv. Crimea Obs., 43, 101, 1971; 44, 40, 1972.
U,B,V: Bull.A.A.S., 4, 224, 1972. M.N., 162, 359, 1973. I.R., 1-10u: Ap.J.Let., 161, L203, 1970; 176, L95, 1972. M.N., 162, 359, 1973.
Spec. Ap.J., 140, 1445, 1964; 142, 634, 1965; 159, 405, 1970; Ap.J.Let., 155, L129, 1969. Ap.J. Suppl., 27, No.251, 1974. A.J., 74, 515, 1969. A.&A., 1, 479, 1969. Bull.A.A.S., 4, 332, 1972. Vel. field. Bull.A.A.S., 1, 362, 1969. IAU Symp. 38, p.79, 1970. Ap.J.Suppl., 27, No.251, 1974. Bull.A.A.S., 6, 321, 1974.
Sptm. Ap.J., 154, 33, 1968; 168, 327, 1971; 178, 617, 1972; 182, 381, 1973; 186, 29, 1973; 190, 19, 1974. Sov. A.J., 13, 593, 1970; 16, 628, 1973. Bol.Tonantzintla, 6, No.37, 97, 1971. Bull.A.A.S., 5, 9, 349, 1973. IAU Symp. 44, p.55, 1972. Ap.Let., 14, 1, 1973. Mol.Absorpt. H₂O, CO: Ap.Let., 14, 1, 1973.
Pol. Lowell Obs. Bull., VI, No.123, 1964. P.A.S.P., 79, 600, 1967. A.J., 72, 783, 1967. Astrofizika, 4, 409, 1968; 7, 417, 1971.
Dyn., mass, encounter model. Ap.J., 140, 1445, 1964; 178, 623, 1972; 184, 735, 1973. Ap.J.Suppl., 27, No.251, 1974. A.&A., 1, 479, 1969. Bull.A.A.S., 4, 424, 1972.
HII reg. Ap.J., 168, 327, 1971; 194, 559, 1974. IAU Symp. 38, p.83, 1970. Bull.A.A.S., 5, 349, 1973. 10, 20u: Ap.J.Let., 193, L7, 1974.
Interfer. Ha: A.&A., 1, 479, 1969. Ap.J.Suppl., 27, No.251, 1974.
SN1945a. (in N5195) HAC No.704, 1945. IAU Cir. No.1018, 1945.
HI 21 cm. Ap.J., 150, 8, 1967. A.&A., 6, 165, 1970; 24, 59, 1973. IAU Symp. 58, p.124, 1974. Source R2 (A.&A., 3, 292, 1969) rejected.
Radio. Ann.Ap., 26, 343, 1963. Ap.J., 144, 553, 1966. Ap.J.Let., 176, L101, 1972. Sov.A.J., 13, 881, 1970. A.&A., 17, 468, 1972. M.N., 159, 15P, 1972. Nature, 241, 260, 1973. Bull.A.A.S., 3, 36, 369, 1971; 5, 29, 1973. IAU Symp. 58, pp.376, 385, 1974. Proc. 1st European Ast. Meet., vol.3, p.1, 1974.
Poss. SN Remnant: A.&A., 26, 105, 1973. "Supernovae & SN Remnants", Ap.& Space Sc. Lib., vol.45, p.56, 1974.
- N5193A, 5193 Pair at 0'5.
- A1329+75A,B = Mk 261, 262. Comp. A = VII Zw 518. Pair at 1'.
Photo. Astrofizika, 10, 7, 1974.
- A1329+75C Dble system, 1'9 n of Mk 261, 262.
Photo., Spec. Astrofizika, 10, 7, 1974.
- N5216, 5218 = Arp 104 = VV 33. P(b) at 4', connected by long streamer.
- N5223 Spec. Ap.J., 148, 321, 1967.
- A1332-33 In a group w. I4296.
- A1332-45 Fourcade-Figueroa Obj.
Photo. Bol.A.A.Argentina, No.16, 10, 1971. A.&A., 23, 405, 1973.
Dim., Ptm., Spec. A.&A., 23, 405, 1973.
- A1332+34A,B,C Triple syst. Comp. A and B form a close pair of Spir. at 1'. Comp. C = Mk 459.
Photo., Spec. Astrofizika, 10, 625, 1974.
- A1333+29 = Haro 38. (Bol. Tonantzintla, No.14, June 1956).
Dim., Ptm., Spec. A.J., 75, 1143, 1970.
HI 21 cm. A.&A., 29, 217, 1973.
- I4296 = PKS 1333-33. Brightest of a group.
Descr. P.A.S.P., 80, 129, 1968.
Ptm. U,B,V: A.J., 74, 335, 1969. Ap.J., 178, 1, 1972.
Mag. and colors reduced using dims. on PSS (3'9: x 3'9:).
- I4299 Pair w. I4296 at 5'6. In group.
Ptm. U,B,V: A.J., 74, 335, 1969.
Mag. and colors reduced using dims. on PSS (2'0 x 0'8).

- N5236 = M83 = PKS 1334-29.
Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967. IAU Symp. 38, p.29, 1970.
Photo. P.A.S.P., 77, 287, 1965. A.&A., 12, 379, 1971. Ap.J., 194, 559, 1974. M.N., 167, 13, 1974.
Ptm. Atl. Gal. Austr., 1968. U.B.V: A.J., 74, 335, 1969. I.R., 1-21 μ : Ap.J.Let., 159, L165, 1970; 176, L95, 1972; 191, L20, 1974. M.N., 164, 155, 1973.
Spec. Observ., 87, 38, 225, 1967.
Dyn., mass. Proc. A.S.Austr., 1, 288, 1969.
HII reg., dist. modulus. Ap.J., 194, 554, 1974.
Interfer. Hq: Bol.A.A.Argentina, No.14, 38, 1968. A.&A., 12, 379, 1971.
SN1923a, Ann.Rev.Ast.Ap., vol.2, p.249, 1964. Supernovae & SN Remnants, Ap.& Space Sc.Lib., vol.45, p.203, 1974.
SN1950b, P.A.S.P., 65, 242, 1953.
SN1957d, (noted 1958 in BGC) IAU Cir. No.1643, 1958. Zs. f. Ap., 49, 202, 1961.
SN1968L, IAU Cir. No.2085, 1968. Ast. Tsirk., No.474, 1968. B.A.A.Cir. No.501, 1968. M.N.A.S.S.A., 27, 105, 1968. Sky & Tel., 36, 295, 1968. A.&A., 19, 99, 1972. M.N., 167, 13, 1974.
 Supernovae & SN Remnants, Ap.& Space Sc.Lib., vol.45, 119, 1974.
HI 21 cm. Proc. A.S.Austr., 1, 104, 1968. A.&A., 29, 425, 1973. Ap.J., 193, 309, 1974.
Radio. Aust. J. Phys., 16, 360, 1963. M.N., 152, 439, 1971. Proc.S.A.Aust., 2, 159, 1972.
- N5248 Descr., Struc. P.A.S.P., 77, 287, 1965; 79, 152, 1967. IAU Symp. 38, 29, 1970.
Sptm. Ap.J., 163, 249, 1971.
HII reg., dist. modulus. Ap.J., 194, 559, 1974.
Dyn., mass. Ap.J., 184, 735, 1973.
Radio. Aust. J. Phys., 21, 193, 1968.
- A1335-33 In I4296 group. Another anon. SO at 5'np (V = 3891 \pm 20, Source L3).
- N5256 = Mk 266 = I Zw 67 = K 388. Dble. system.
Photo., Spec. Mem.S.A.Ital., 40, 559, 1969 = KPNO Cont. No.510.
- N5253 = Haro 10. (Bol. Tonantzintla, No.14, June 1956).
Descr., Struc., Prop. Ap.J., 146, 593, 1966. IAU Cir. No.2413, 1972. Ap. & Space Sc., 19, 469, 1972.
 A.J., 79, L242, 1974.
Photo. Ap.J., 146, 593, 1966; 161, 821, 1970; 175, 329, 1972. P.A.S.P., 85, 427, 1973; 86, 439, 1974.
 Ap. & Space Sc., 19, 469, 1972.
Ptm. Atl. Gal. Austr., 1968. Ap.J., 161, 821, 1970. Ap.& Space Sc., 19, 469, 1972. A.J., 83, 882, 1968. 12 col.: Ap.J., 145, 36, 1966. U.B.V: Ap.J., 192, 279, 1974. I.R., 1-21 μ : Ap.J.Let., 159, L165, 1970; 176, L95, 1972; 191, L19, 1974. M.N., 164, 155, 1973.
Spec. P.A.S.P., 81, 23, 1969. Ap.J.Let., 176, L123, 1972. Ap. & Space Sc., 19, 469, 1972.
Vel. disp.: Ap.J., 161, 821, 1970; 175, 329, 1972.
Sptm. Ap.J., 161, 821, 1970; 192, 279, 1974. Ap. & Space Sc., 19, 469, 1972.
Dyn., mass. Proc. A.S.Austr., 1, 288, 1969. Ap.J., 161, 821, 1970. Ap.J.Let., 176, L123, 1972.
SN1895b, (Z Cen) Ann. Rev. Ast. Ap., vol.2, p.253, 1964.
SN1972e, IAU Cir. Nos.2405, -07, -09, -13, -21, -34, 1972. Inf. Bull.V.A., Nos. 683, 700, 1972; 828, 1973. Ast. Tsirk., No.706, 1972. Yamamoto Cir. Nos. 1755, -56, 1972. Nature, 238, 452, 1972. Nature, Phys. Sc., 238, 21, 1972; 241, 7, 1973; 243, 144, 1973. Ap.J.Let., 176, L123, 1972; 177, L59, 1972; 180, L97, 1973. Ap.J., 182, 225, 1973; 185, 303, 1973. Ap.Let., 12, 101, 1972. P.A.S.P., 85, 427, 1973; 86, 296, 439, 1974. A.&A., 22, 465, 1973; 28, 295, 1973.
 M.N.A.S.S.A., 32, 54, 1973. Bull.A.A.S., 5, 12, 28, 1973. Supernovae & SN Remnants, Ap.& Space Sc. Lib., vol.45, pp.103, 131, 135, 1974. IAU Symp. 66, p.185, 1974. Highlights Ast., 3, p.533, 1974. X-rays. Ap.J.Let., 192, L61, 1974. Ap.J., 182, 411, 1973; 193, 535, 1974. Bull.A.A.S., 6, 269, 1974.
HI 21 cm. A.&A., 17, 445, 1972.
Radio. Nature, 219, 1032, 1968. A.&A., 31, 447, 1974.
- N5257, 5258 = Arp 240 = VV 55 = Ho 532a,b = K 389. P(b) at 1'3. Connected.
Radio. M.N., 167, 251, 1974 (uncertain).
- A1337+43 = Mk 267. Sptm. Astrofizika, 7, 389, 1971.
- A1338+54 = Holmberg V (1958). HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.
 Ap.J.Suppl., 18, No.157, 1969.
- N5283 = Mk 270 = MCG 11-17-7. Class 2 Seyfert N. Note corr. to MCG R.A.
Spec. Ap.J., 192, 581, 1974.
Radio. Izv. V.U.Z. Radiofizika, 16, 1342, 1973.
- N5278, 5279 = Arp 239 = VV 19 = Mk 271 = I Zw 69 = K 390. P(b) at 0'6. Connected.
- N5273 = Ho 535a = K 391a. P(a) w. N5276 at 3'3.
Ptm. 11 col.: A.&A., 29, 77, 1973.
- N5276 = Ho 535b = K 391b. P(a) w. N5273 at 3'3.
- A1342+56 = Mk 273 = I Zw 71. Class 2 Seyfert N.
Radio. Izv. V.U.Z. Radiofizika, 16, 1342, 1973.
- N5296, 5297 = K 394. P(b?) at 1'6.
- N5301 HI 21 cm. Source R2 (A.&A., 6, 456, 1970), quality D, rejected.
- N5291 P(b) w. anon. at 0'6. In I4329 group.
- A1344+34B,A = VV 317 = Ho 541b,a = K 396. Pair at 1'5. Listed as A1345B,A in BGC.
- N5292 In I4329 group.
- A1345+34 = Mk 461. P. w. comp. 3'9 sp, 2'2 f.

N5298 P(a) at 5'6 w. anon. SB(r)b. In I4329 group.

N5308 Rot. vel. A.&A., 8, 364, 1970.

N5303 = Ho 542a = K 397a. P. w. Ho 542b = K 397b at 2'8. $m_p = 12.9$ in CGCG, vol.III, 1966.
 $m_p = 12.5$ in MCG, vol.II, 1964.

A1345-30, I4327, N5302, I4329 In a group. I4329 is brightest,(for Photo. ref. see I4329A).

I4329A At 3'1 from I4329. In group. Class 1 Seyfert N.
Photo., Ptm., Spec. Ap.J.Let., 181, L55, 1973.
Ptm. 10.6u: Ap.J.Let., 191, L19, 1974.
Sptm. M.N., 168, 109, 1974.
Radio. Poss. detec., Ap.J.Let., 181, L55, 1973.

A1346+26 = 4C 26.42 = PKS.
Spec. V = 18,870, Source K3 (Ap.J.Let., 182, L13, 1973).

N5304 In I4329 group.

N5322 Ptm. 5 col.: A.J., 73, 313, 1968.

A1348+38 = DDO 183. HI 21 cm. A.&A., 34, 43, 1974.

I0954 = VII Zw 527, $m_p = 14.5$. Spec. A.&A., 33, 113, 1974.

N5328, 5330 Pair of E at 1'7.

N5334 = I4338.

A1350+64. = Mk 277 = VII Zw 528. Close mult. syst. of connected compacts. Total $m_p = 15.7$.

N5339 $m_p = 12$ in MCG, vol.III, 1963.

N5350 = Ho 555c. In small group w. N5353, 5354, 5355.

N5351 = Ho 554a. P. w. N5341 at 12'5, N5349 at 3'4.

N5353 = Ho 555b. In small group w. N5350, 5354, 5355. N5354 at 1'2.
Ptm., B,V,R: Ap.J., 183, 731, 1973.

N5354 = Ho 555a. In small group w. N5350, 5353, 5355. N5353 at 1'2.

N5348 Photo., Isodens. A.J., 79, 671, 1974.

A1351+69 = Mk 279. Class 1 Seyfert N.
Spec. Ap.J., 192, 581, 1974.
Ptm. Ap.J., 171, 5, 1972.
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972.
Radio. Izv. V.U.Z.Radiofizika, 16, 1342, 1973.

A1352+15 SN1954y and Photo. P.A.S.P., 86, 516, 1974.

N5356 Photo. Isodens.: A.J., 79, 671, 1974.

A1352+54 = Holmberg IV (1958) = DDO 185. In M101 group. Listed as A1353 in BGC.
Photo. Ap.J., 194, 223, 1974.
HII reg., Dist. modulus. Ap.J., 194, 223, 1974.
HI 21 cm. Proc. 1st European Ast. Meet., vol.3, p.15, 1974.

N5357 In I4329 Group.

N5360 = Ho 557b. P(a) w. N5364 at 8'7.
Descr., Prop. Ap.J., 146, 593, 1966. A.J., 79, 1242, 1974.
Photo. A.J., 79, 671, 1974. Astrofizika, 10, 297, 1974.
Ptm. Prob. Cosmic Phys. (Kiev Univ.), 7, 137, 1972.
Isodens. A.J., 79, 671, 1974.
Spec. A.&A., 37, 7, 1974. Astrofizika, 10, 297, 1974.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle 1966.

N5371 = N5390. Ptm. Bull.Ap.Inst. Duschambe, No.46, 25, 1966.
HI 21 cm. M.N., 150, 337, 1970.

N5363 P(a) w. N5364 at 14'5.
Descr., class. Ap.J., 146, 593, 1966. Astrofizika, 3,427, 1967.
Photo. A.J., 79, 671, 1974.
Ptm. Prob. Cosmic Phys. (Kiev Univ.), 7, 137, 1972. Bull.A.A.S., 6, 462, 1974.
Isodens.: A.J., 79, 671, 1242, 1974.
Rot. vel. A.&A., 8, 364, 1970.
Radio. Aust. J. Phys., 21, 193, 1968.

N5376 In group w. N5379, 5389.

N5364 = Ho 557a. P(a) w. N5360 at 8'7.
Descr., class. P.A.S.P., 81, 51, 1969.
Photo. P.A.S.P., 81, 51, 1969. A.J., 79, 671, 1974.
Ptm. Isodens.: A.J., 79, 671, 1974.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.

N5379, 5389 = Ho 561b,a. Pair at 4'2.
N5378, 5380 Pair at 11'.
N5383 = Mk 281. Photo. IAU Symp. 44, p.56, 1972.
HII reg. Bull.A.A.S., 6, 343, 1974.
HI 21 cm. IAU Symp. 58, p.425, 1974.
Radio. A.&A., 29, 249, 1973.
A1355+29A,B = Mk 280, Close pair at 0;5.
N5365B at 9' f N5365.
N5394, 5395 = Arp 84 = VV 48 = I Zw 77 = Ho 563b,a = K 404. P(b) at 1'9, connected.
Photo. A.&A., 3, 418, 1969. IAU Symp. 29, p.61, 1968.
Spec. (5394): A.&A., 3, 418, 1969.
A1357-45 = HA 72, No.2 = HN 1734. Listed as A1358 in BGC.
N5403 = VV 310 = Ho 564a. P. w. Ho 564b at 1'8.
N5422 = Ho 567a. (Ho 567b at 2'2 is a *).
A1358-11 = PKS. Spec. Ap.J.Let., 154, L101, 1968.
N5430 = Ho 569a. (Ho 569b at 0'4 may be a *).
N5408 Asym., emiss. knots. (= Henize 959).
Descr., Photo. Ap.J., 175, 329, 1972.
Spec., vel.disp. Ap.J., 175, 329, 1972. M.N., 168, 27P, 1974.
N5443 = Ho 578a. (Ho 578b at 1'8 is a *).
N5419 = PKS 1400-33? (RS coord.: 14 00.97, -33 48.0).
Descr. P.A.S.P., 80, 129, 1968.
Ptm. U.B.V: A.J., 74, 335, 1969. Ap.J., 178, 1, 1972.
Spec. Aust. J. Phys., 25, 233, 1972. Ap.J., 172, 37, 1972; 178, 1, 1972.
Radio. Proc. A.S. Aust., 2, 159, 1972.
N5426, 5427 = Arp 271 = VV 21 = Ho 573b,a. P(b) at 2'3. Connected.
HI 21 cm. A.J., 79, 767, 1974 (Vel. and flux attrib. to 5427).
Radio. M.N., 167, 251, 1974.
A1401+11 = K 411b. Comp. close south, in contact.
SN1951b and Photo. P.A.S.P., 85, 427, 1973.
N5444 = 4C 35.32 = B2 1401+35.
Prec. coord.: Ap.Let., 10, 121, 1972. A.J., 78, 521, 1973.
Spec. Ap.J.Let., 164, L35, 1971.
Pol. Ap.J.Let., 179, L93, 1973.
Radio. Ap.Let., 6, 49, 1970. A.J., 75, 523, 1970. Ap.J., 189, 399, 1974.
N5457 = M101 = Arp 26 = VV 344 = 4C 54.30.1. Details (HII reg.) = N5447, -53, -55, -61, -62, -71.
Descr. IAU Symp. 38, p.28, 1970.
Photo. A.&A., 29, 57, 447, 1973. Ap.J., 194, 223, 1974. IAU Symp. 38, p.13, 1970.
Supernovae & SN Remnants, Ap.& Space Sc. Lib., vol.45, p.52, 1974.
Ptm. U.B.V: A.&A., 5, 413, 1970. M.N., 162, 359, 1973. I.R., 1-10u: Ap.J.Let., 176, L95, 1972.
M.N., 162, 359, 1973. B*, var.*: Ap.J., 194, 223, 1974.
Spec. A.&A., 9, 181, 1970.
Sptm. Observ., 88, 239, 1968. Sov.A.J., 13, 593, 1970; 16, 628, 1973.
Far UV: N.A.S.A., SP 310, p.559, 1972.
Pol. P.A.S.P., 79, 600, 1967 (in emiss. reg.).
Rot., mass. Ap.Let., 8, 17, 1971.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969; 194, 223, 1974.
I.R., 10-20u (up. limits), Ap.J.Let., 193, L7, 1974.
Sptm. Ap.J., 159, 809, 1970; 161, 33, 1970; 168, 327, 1971. Bull.A.A.S., 5, 448, 1973.
Dist. modulus, Ap.J., 194, 223, 1974.
Interfer. H α : A.&A., 9, 181, 1970; 12, 379, 1971.
SN1909a. Ap.J., 194, 223, 1974. Supernovae & SN Remnants, Ap.& Space Sc. Lib., vol.45, p.215, 1974.
SN1951? Ap.J., 194, 223, 1974.
SN1970g. IAU Cir. Nos.2269, -71, -82, -92, 1970. Yamamoto Cir. No.1725, 1970. Inf.Bull.V.S., No.505, 1971. Ast. Tsirk., No.679, 1972. Sov.A.J., 16, 7, 1972. Ap.J., 174, 383, 1972; 185, 303, 1973; 193, 27, 1974. A.&A., 29, 57, 1973. Nature, Phys. Sc., 243, 42, 1973. J.R.A.S.Canada, 68, 36, 1974. Supernovae & SN Remnants, Ap.& Space Sc. Lib., vol.45, p.145, 1974. Highlights of Ast., 3, p.533, 1974.
HI 21 cm. Ap.J., 150, 8, 1967; 176, 315, 1972. Nature, 221, 531, 1969. A.&A., 7, 141, 1970; 12, 108, 1971; 13, 99, 108, 1971; 29, 447, 1973. IAU Symp. 44, p.12, 1972. IAU Symp. 58, p.427, 1974.
Proc. 1st European Ast. Meet., vol.3, p.15, 1974.
Radio. Ap.J., 142, 1333, 1965; 176, 315, 1972. A.J., 78, 18, 1973.
A1402-00 = K 413b.
A1402+09 SN1950f and Photo. P.A.S.P., 85, 427, 1973.
N5473 Sptm. Observ., 88, 239, 1968.

- N5474 = VV 344. In M101 group. Photo. Ap.J., 194, 223, 1974.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 156, 847, 1969; 194, 223, 1974.
Dist. modulus. Ap.J., 194, 223, 1974.
HI 21 cm. Proc. 1st European Ast. Meet., vol.3, p.15, 1974.
- N5477 = DDO 186. In M101 group. Photo. Ap.J., 194, 223, 1974.
HII reg., dist. modulus, Ap.J., 194, 223, 1974.
HI 21 cm. Proc. 1st European Ast. Meet., vol.3, p.15, 1974. Confused by M101.
- N5468 = Ho 585a. Detail or * = N5467. P(a) w. N5472 at 5'1.
- N5472 = Ho 585b. P(a) w. N5468 at 5'1.
- N5480, 5481 = Ho 588b, a = K 416. P(a) at 3'1. Note coord. to BGC coord., (NGC coord. are correct, MWC 626 coord. wrong.)
- N5484 P(a) w. N5485 at 3'9.
- N5485 P(a) w. N5484 at 3'9, N5486 at 6'5.
Sptm. Observ., 88, 239, 1968.
Radio. Ap.J., 157, 481, 1969. A.J., 78, 18, 1973.
- N5486 P(a) w. N5485 at 6'5.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 194, 559, 1974.
Dist. modulus. Ap.J., 194, 559, 1974.
- A1407-01 = 4C -01.32. Spec. Ap.J.Let., 148, L57, 1967.
- N5490 = 4C 17.57 = PKS 1407+17 = Ho 595a. P. w. Ho 595b at 1'8 nf. In group w. I0982, 983 and others.
Radio. A.J., 78, 369, 1973. Ap.J., 189, 399, 1974.
- I0982, 0983 = Arp 117. P(b) at 2'7, connected. N5490C (= Arp 79) at 7', N5490 at 12'. In N5490 group.
Descr., Spec. Ap.J., 148, 321, 1967 (mean V for both obj.: 5038+86).
- N5490C = Arp 79. At 4'7 nf N5490, 7's of I0983. In group.
- A1409-65 Circinus Obj. Obscured, low surf. br.
Photo., Ptm., Spec. Freeman et al. Preprint 1974.
- A1409+52 in HMS. Listed as A1410 in BGC. Not a R.S. (The radio gal. 3C 295 is 8' s).
- N5506, 5507 = Ho 604a, b = K 419. Pair at 4'.
- N5523 HI 21 cm. Source R2 (A.&A., 3, 292, 1969), quality D, rejected.
- N5532 = 3C 296 = 4C 10.39. Brightest in a group. Often misident. as I5532.
Descr. P.A.S.P., 80, 129, 1968.
Ptm. U,B,V,R: Ap.J., 145, 1, 1966; 178, 25, 1972; 183, 731, 1973.
Spec. Ap.J., 145, 1, 1966.
- N5544, 5545 = Arp 199 = VV 210 = K 422. P(c) at 0'6. Overlapping parts.
- N5534 = Ho 623a. (Ho 623b at 0'5 may be a *).
- N5548 Class 1 Seyfert N. Diam.N: A.J., 73, S175, 1968. $B_N = 14.8-15.8$, $B_T(\text{excl.N}) = 13.30$.
Photo. A.&A., 15, 110, 1971.
Ptm. U,B,V: A.J., 73, 858, 866, 870, 1968. Pub.Dept.A.Univ. Texas, II, 2, No.7, 1968.
Ap.Let., 12, 1, 1972. Sov.A.J., 16, 763, 1973; 17, 169, 1973. M.N., 169, 357, 1974.
Ast. Tsirk., No.620, 1971; 777, 1973. IAU Cir. No.2529, 1973. "Att...Conv. Sci. Osserv. Cima
Ekar, Padova-Asiago", p.101, 1973 = Cont. Asiago No.300bis. I.R., 1-20u: A.J., 73, 866, 870,
1968. Ap.J.Let., 159, L165, 1970; 161, L203, 1970; 176, L95, 1972. M.N., 169, 357, 1974.
Spec. Ap.J., 169, 449, 1971; 174, 483, 1972; Ap.J.Let., 179, L89, 1973. IAU Symp. 44, p.155, 1972.
Sptm. Ap.J.Let., 154, L53, 1968. Ap.J., 162, 743, 1970; 164, 1, 1971; 171, 5, 1972. C.R.Acad. Sc.
Paris, (B), 265, 1149, 1967. Sov.A.J., 11, 553, 1968. Astrofizika, 7, 389, 1971. Ast.Tsirk.
No.467, 1968. Nuclei of Galaxies, p.151, 1971.
Pol. Ap.J., 151, 71, 1968.
Radio. Aust. J. Phys., 19, 565, 1966. A.J., 73, 876, 1968. A.&A., 15, 110, 1971.
- N5557 Ptm., Dyn., mass. Ap.J., 139, 284, 1964.
- N5556 = DDO 243. P(a) w. anon. Sm at 9'6.
- N5560, 5566, 5569 = Arp 286 = Ho 630b, a, c. N5560, 5566 at 5'0, distorted. N5566, 5569 at 4'2.
Ptm. Isoph. P.A.S.P., 78, 125, 1966.
- N5585 In M101 group.
Photo., HII reg., Dist. modulus. Ap.J., 194, 223, 1974.
- N5574, 5576 = Ho 632b, a. Pair at 2'7.
- N5607 = Mk 286 = VII Zw 547. Pec. spir., $m_p = 13.9$.
- A1420+15 SN1955k and Photo. P.A.S.P., 86, 516, 1974.
- A1420+46 = I Zw 84. Prob. SO. $m_p = 16.2$
- A1420+33 = Mk 471. Class 1 Seyfert N.
- N5595, 5597 = Ho 638a, b. Pair at 4'2.

N5613, 5614 = Arp 178 = VV 77. P(b) at 2'0. N5615 is B knot on pseudo (R) of N5614 and from which a diffuse tail emerges.

A1422+26 = PKS = CTD 86. E gal. in a Cl. Spec. Ap.J.Let., 160, L79, 1970.

A1422+44 = DDO 190 = I Zw 87. Resolved blue dwarf.

A1425+13A Fairall Compact. Spec. M.N.A.S.S.A., 29, 118, 1970, M.N., 153, 383, 1971.

A1425+13B Fairall Compact. Spec. M.N., 153, 383, 1971.

N5633 = I Zw 89. Sptm. Sov.A.J., 16, 628, 1973.

A1426+27 = Haro 41 (Bol. Tonantzintla, No.14, June 1956). In a Cl.
Dim., Ptm., Spec. A.J., 75, 1143, 1970.

N5635 At 9' n of Haro 41 (A1426+27). Ident. error in UGC. N5635 brighter and larger than Haro 41.

N5636, 5638 = Ho 653b,a. Pair at 2'0.

N5660 P. w. F anon. IBm at 2'5. N5676 at 30'5.

N5656 $m_p = 12.7$ in CGCG, vol.III, 1966. $m_p = 13$ in MCG, vol.II, 1964.

I4444 Class., Photo., dim. Ap.& Space Sc., 28, 365, 1974.

A1428+27 = Haro 42 (Bol. Tonantzintla, No.14, June 1956) = Mk 685.
Dim., Ptm., Spec. A.J., 75, 1143, 1970.
HI 21 cm. A.&A., 29, 417, 1973.

N5643 Spec. Bull.A.A.S., 4, 237, 1972.
Radio. Aust. J. Phys., 16, 360, 1963.

N5665, 5665A = Arp 49. Comp. A is attached compact.
Photo., Spec. A.&A., 3, 418, 1969.

N5678 P. w. s anon. E3 at 1'8.
Photo., Ptm. Astrofizika, 6, 367, 1970.

I1029 P(a) w. N5676 at 26'5.

N5668 SN1954b. IAU Cir. Nos. 1449, 1452, 1954. Ann. Rev. Ast. Ap., vol.2, p.253, 1964.
SN1952g and Photo. P.A.S.P., 86, 516, 1974.
HI 21 cm. Ap.J., 142, 148, 1965. M.N., 150, 337, 1970. Source R2 (A.&A., 3, 292, 1969), quality D, rejected.

N5676 P(a) w. N5660 at 30'5. I1029 at 26'5.
Photo., Ptm. Astrofizika, 6, 367, 1970.
Sptm. Sov.A.J., 16, 628, 1973.

N5682 = Ho 663a. P. w. N5683 at 1'4, N5689 at 8'3. MCG dim. for N5682 and 83 interchanged.
Photo., Spec. Astrofizika, 9, 509, 1973.

N5683 = Mk 474 = Ho 663b. P. w. N5682 at 1'4. Class 1 Seyfert.
Photo. Astrofizika, 9, 509, 1973.
Spec. Astrofizika, 9, 509, 1973. Ast. Tsirk. No.809, 1974.

N5689 P(a) w. N5682, 5683 at 8'3, 5693 at 11'8, and others. Brightest of a group.

N5693 P. w. N5689 at 11'8.

N5701 S anon. Spir. visible betw. lens and (R).

N5713 P(b) w. N5719 at 12'.
Ptm. I.R. (up.limit). Ap.J.Let., 158, L163, 1970.
Radio. Aust. J. Phys., 19, 565, 1966.

N5716 P(a) w. N5728 at 23'.

N5719 P(b) w. N5713 at 12'.

A1439+53 = Mk 477 = I Zw 92, No.1, No.2 is 50" nf, F connection.
Descr., dim., Photo. Ap.J., 143, 192, 1966.
Ptm. Ap.J.Let., 150, L177, 1967. Ap.J., 171, 461, 1972.
Spec. Ap.J., 143, 192, 1966. Pub.A.S.Japan, 24, 525, 1972.

N5728 P(a) w. N5716 at 23', s anon. SB(s)m at 3'2.

N5740 = K 434a. P(a) w. N5746 at 18'.

N5746 = K 434b. P(a) w. N5740 at 18'. Photo. A.J., 72, 1032, 1967.
Ptm. A.J., 72, 1032, 1967. IAU Symp. 58, p.337, 1974.
Rot. vel. A.&A., 8, 364, 1970.

A1443+08A,B,C = VV 109. Comp. A and B in contact, comp. C at 1'.

I1055 = Ho 677a. Ho 677b,c at 2'8 and 2'2.

N5756 = Ho 676a. (Ho 676b at 2' is probably a *).

N5757 P. w. anon. S sp at 3'6.

A1446-09 = Arp 261 = VV 140 = DDO 197. Asym. arm w. B emiss. knots at end.
 Dwarf comp. at 5'5 n.
HI 21 cm. A.J., 79, 767, 1974.

I1065 = 3C 305 = 4C 63.21 = MCG 11-18-8. Abs. lanes, vF spir. arm. Note corr. to MCG R.A.
Descr., Photo. Ap.J., 145, 1, 1966.
Ptm. U,B,V: Ap.J., 145, 1, 1966; 178, 25, 1972.
Spec. Ap.J., 145, 1, 1966. Sov. A.J., 12, 561, 1968.
Radio. Ap.J., 142, 106, 1965. M.N., 156, 377, 1972; 169, 477, 1974. A.&A., 34, 341, 1974.

A1448+07A,B = 4C 06.51? Comp. A is dble. Comp. B at 0'6.

A1448+35 = II Zw 70 = VV 324b = K 438a. P(a) w. A1449+35 at 4'1.
Photo. Galileo Conf. on Cosmology, p.135, Firenze 1966.
Spec., Sptm. Ap.J., 175, 335, 1972.
Rot., mass. Ap.J., 175, 335, 1972.
HI 21 cm. A.&A., 23, 253, 1973.

A1449+35 = II Zw 71 = VV 334a = K 438b. P(a) w. A1448+35 at 4'1.
Photo. Galileo Conf. on Cosmology, p.135, Firenze 1966.
HI 21 cm. A.&A., 23, 253, 1973.

N5777 $m_p = 12$ in MCG, vol.I, 1962. $m_p = 14.2$ in CGCG, vol.IV, 1968.

I1067 P. w. I1066 (S:) at 2'2.

N5774, 5775 = Ho 685b,a=K 440. Pair at 4'5.

N5783 = N5785.

I1076 = Mk 479 = K 444b. P(a) w. I1075 = K 444a at 4'8 np.

N5787 = I Zw 98. F halo. $m_p = 14.1$.

N5791 P(a) w. I1077 at 20'.

N5796 P. w. N5793 at 4'3.

N5793 = OQ-194. P. w. N5796 at 4'3.
Radio. A.J., 77, 557, 1972. Proc. A.S.Aust., 2, 159, 1972.

N5820 = Arp 136. P. w. N5821 at 3'6 nf. Sev. s gal. nearby.

N5806 In N5846 group. P(a) w. N5813 at 21'.

N5832 QSO 3C 309.1 ($z = 0.904$) at 6'1.
Photo., Spec. Ap.J., 170, 233, 1971.

N5811 = K 450.

N5812 P. w. I1084 5'0 sf.

N5813 = Ho 688a. In N5846 group. P. w. N5814 at 4'8, N5806 at 21'.
Dim. Ap.J., 173, 485, 1972.

N5827 = 4C 26.45? Asym. Pec.

N5829 = Arp 42 = VV 7. P(b) w. I4526 at 1'3 np.

I1090 = MCG 7-31-25. Note corr. to MCG Dec.

N5838 In N5846 group. P(a) w. N5848 (SO sp?) at 17'5.
Ptm. 5 col.: A.J., 73, 313, 1968.

N5839, 5845 In N5846 group.

N5846A = Ho 694b. Compact comp. of N5846 at 0'7.
Photo. Ap.J., 181, 27, 1973.
Ptm. Ap.J., 181, 27, 1973. 10 col.: Ap.J., 179, 731, 1973.
Dyn. Ap.J., 179, 423, 1973; 181, 27, 1973.

N5846 = Ho 694a. Brightest in a group. P(a) w. N5846A at 0'7.
Photo. Ap.J., 181, 27, 1973.
Ptm. U,B,V,R: Ap.J., 143, 187, 1966; 183, 735, 1973. 5 col.: A.J., 73, 313, 1968.
I.R., I-3.5 μ : Ap.J., 143, 187, 1966.
Dyn., mass. Ap.J., 181, 27, 1973.
HI 21 cm. up. limit: A.&A., 25, 451, 1973.

N5850 In N5846 group. P(a) w. N5846 at 10'.
III reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966.

N5860 = Mk 480 = I Zw 102 = K 454. Close pair in common halo.

N5866 = M102. Wide pair w. N5907. N5867, small E at 1'5 sp.
Ptm. 5 col.: A.J., 73, 313, 1968.
Spec., vel. disp. A.&A., 31, 129, 1974.
Sptm. Far UV: N.A.S.A., SP No.310, 559, 1972.
Rot. vel. A.&A., 8, 364, 1970. Bull.A.A.S., 4, 214, 1972.
Radio. A.&A., 29, 249, 1973.

N5857 = K 455a. P(b?) w. N5859 at 2'0.
SN1950h., SN1955m. P.A.S.P., 86, 516, 1974 (w. Photo.).

N5859 = K 455b. P(b?) w. N5857 at 2'0. $V = 12.09$, $B-V = 0.80$ ($\log A = 1.76$, Source C) for N5857+59.

I1091 P(a) w. N5858 at 9'6.

I1099 SN1940c. Harvard A.C., 524, 1940. Zs.f.Ap., 49, 202, 1961.

N5858 P(a) w. N5861 at 9'6 sf, I1091 9'6 np.

N5861 P(a) w. N5858 at 9'6 np.
SN1971d. IAU Cir. No.2309, 1971.
Radio obs. by Cameron (1971) rej.

A1508+67 = DDO 199. UMi dwarf.
Star counts. A.J., 69, 438, 1964.
Struct., Phys. data. A.J., 74, 587, 1969. Ann.Rev.Ast.Ap., 9, 35, 1971.
Ptm. Var. *: B.A.N., 19, 275, 1967; B.A.N.Suppl.2, No.5, 371, 1968. Bull.A.A.S., 73, S204, 1968.
Dyn., mass. A.J., 69, 438, 1964. Ap.J., 144, 868, 1966.

N5879 SN1954c. IAU Cir. No.1476, 1954. Zs.f.Ap., 49, 202, 1961.

A1511-15 = Fath 703 (A.J., 28, 75, 1914).

N5888, 5889 Pair at 4'0. Data in BGC and A.&A.Suppl., 12, 89, 1973, are for N5888, not 5889.

N5893 = Ho 701b. P. w. N5895-96 at 4'3.

N5899 P(a) w. N5900 at 9'5.
HI 21 cm. M.N., 150, 337, 1970.

N5900 = Ho 702a. P(a) w. N5899 at 9'5. N5901 (= Ho 702b) at 1'3 may be a *.

N5905 P(a) w. N5908 at 13'.
Spec. A.&A., 35, 151, 1974.
SN1963o. and Photo. Cont. Asiago Obs. No.174, 1965.

A1514+43 = II Zw 73, No.1. $m_p = 15.7$. No.2 at 1'4 f.

A1514+07 = 3C 317 = 4C 07.40. In Abell 2052.
Descr., class. Ap.J., 140, 35, 1964. P.A.S.P., 80, 129, 1968.
Photo. Ap.J., 140, 35, 1964.
Ptm. U,B,V,R: A.J., 75, 695, 1970. Ap.J., 178, 1, 25, 1972; 183, 731, 1973.
Radio. Ap.J., 142, 106, 1965; 144, 216, 1966; 148, 367, 1967. A.J., 78, 1030, 1973.
X-rays. (in Abell 2052): Ap.J.Let., 185, L13, 1973; 188, L41, 1974.

N5907 = Ho 704a. N5906 is part of it. P. w. Ho 704b at 12'.
Photo. P.A.S.P., 78, 495, 1966.
Rot. vel. A.&A., 8, 364, 1970.
SN1940a. Ann.Rev.Ast.Ap., vol.2, p.249, 1964. Stellar Structure, vol.VIII of Stars and Stellar Systems, p.396, 1965.
HI 21 cm. (halo) A.&A., 28, 95, 1973; undetected.
Radio. Ap.J., 144, 553, 1966.

N5898 P(a) w. N5903 at 5'6.

N5908 P(a) w. N5905 at 13'.

A1515-23, N5903 Form triplet w. N5898.

A1516+42 = I Zw 107. Connected close pair. $m_p = 14.9$.
Descr., Photo. P.A.S.P., 77, 119, 1965.

N5916A, 5915, 5916 Triple interacting system. N5916A, 5915: P(b) at 4'6; N5915, 5916:P(b) at 4'8.

N5920 = 3C 318.1 = 4C 07.41 = UGC 9822. In a group.
Ptm. U,B,V,R: Ap.J., 183, 711, 731, 1973.
Spec. Ap.J., 183, 711, 1973. M.N., 168, 307, 1974.
Radio. M.N., 168, 307, 1974.

N5921 Photo. IAU Symp. 28, p.23, 1970.
HII reg. Ap.J.Suppl., 27, No.239, 1974.

A1520+29 SN1962b and Photo. P.A.S.P., 75, 236, 1963.

N5929, 5930 = Arp 90 = I Zw 12 = Ho 710b,a = K 466. P(c) at 0'5. F Irr. syst. at 5'5 nf.

A1526+55 = Mk 482 (Mk 481 is 6'3 sp; fainter and smaller).

A1531+46 = I Zw 115, $m_p = 15.2$
HI 21 cm. Source R2, $V_{21} = 655 \pm 50$. (A.&A., 8, 424, 1970. IAU Symp. 44, p.264, 1972) qual.C, rejected.

N5951 = Ho 713a. (Ho 713b at 1'9 is a *).
 N5953, 5954 = Arp 91 = VV 244 = Ho 714b, a = K 468, P(c) at 0'8.
Radio, M.N., 167, 251, 1974.
 N5963 = K 469a. $m_p = 12$ in MCG, vol.I, 1962. $m_p = 13.0$ in CGCG, vol.III, 1966.
 N5965 = K 469b. $m_p = 11$ in MCG, vol.I, 1962, $m_p = 13.4$ in CGCG, vol.III, 1966.
 A1534+38 = I Zw 117. Connected close pair of compacts; total $m_p = 14.4$.
 N5962 = Ho 716a. (Ho 716b at 1'5 is a *).
HI 21 cm. Source R2 (A.&A., 6, 456, 1969), qual. D, rejected.
 I4562, 4562A = I Zw 118 Nos.1,2. Pair at 1'2. No.2, very compact. I4562 = MCG 7-32-34.
Ptm. P.A.S.P., 85, 533, 1973.
 A1534+58 = Mk 290. Class 1 Seyfert.
Ptm. Ap.J., 171, 5, 1972.
Sptm. Astrofizika, 7, 389, 1970. Ap.J., 171, 5, 1972.
Radio, Izv. V.U.Z. Radiofizika, 16, 1342, 1973.
 Mag. and colors reduced using dim. on PSS (0'35 x 0'30:).
 I1143 2 comp. at 2'8 and 3'3 sp. (at same redshift) In foreground of Abell 2247.
Spec. Ap.J., 182, 351, 1973.
 N5964 = I4551? HII reg. Ap.J.Suppl., 27, No.239, 1974.
 A1535+54 = Mk 486 = I Zw 111, No.1. Class 1 Seyfert. I Zw 21, No.2 at 1'3 np, $m_p = 17.1$, at same redshift.
Spec. P.A.S.P., 81, 535, 1969. Astrofizika, 10, 485, 1974.
 N5976 In group w. N5981, 82, 85.
 A1535+55 = Mk 487 = I Zw 123. $m_p = 15.2$. Similar to II Zw 40 (A0553+03); see Ap.J., 160, 405, 1970.
 N5970, I1131 Pair at $\sim 8'$.
 N5981 = Ho 719c. P(a) w. N5982 at 6'3.
 N5982 = Ho 719a. P(a) w. N5981 at 6'3, N5985 at 7'7.
Ptm. U,B,V + I.R., 1-3.5u: Ap.J., 143, 187, 1966. 10 col.: Ap.J., 179, 731, 1973.
 N5985 = Ho 719b. P(a) w. N5982 at 7'7.
 N5987 $m_p = 12$ in MCG, vol.I, 1962; $m_p = 13.3$ in CGCG, vol.IV, 1968.
 N5967A, 5967 Pair at 9'.
 N5992 = Mk 489 = K 471a. P(a) w. N5993 = K 471b at 2'5 nnf.
 N6015 Rot. vel. A.&A., 8, 364, 1970.
HII reg. Ap.J., 194, 559, 1974. Ap.J.Suppl., 27, No.239, 1974.
Dist. modulus: Ap.J., 194, 559, 1974.
 A1552+19 = Mk 291. Class 1 Seyfert.
Radio, Izv. V.U.Z. Radiofizika, 16, 1342, 1973.
 A1554+42 = I Zw 129. $m_p = 14.3$. MCG 7-33-16 is 1'2 np, $m_p = 14$.
Spec., Sptm. rot., mass. Ap.J., 175, 335, 1972.
Vel. disp. Bull.A.A.S., 4, 214, 1972.
 N6018, 6021 In foreground of Abell 2147. Spec. A.J., 77, 331, 1972.
 N6022, 6023 In Abell 2147. Spec. A.J., 77, 331, 1972.
 N6027, 6027A,B,C = VII Zw 631 = VV 115. Dense Seyfert Sextet. Note change of ident. from BGC.
 Seyfert's original designation adopted, as in VV and MCG. Comp. D (Scp) has mean V = 19876+42
 (Sources K3, S4).
Photo. Nuclei of Galaxies, p.366, 1971.
Ptm. V,B,R:(total for group): Ap.J., 178, 731, 1973.
Isodens. Ap.J.Let., 194, L125, 1974.
Spec. A.J., 77, 448, 1972. Ap.J., 185, 797, 1973. Nuclei of Galaxies, p.368, 1971.
Radio, A.&A., 28, 379, 1973.
 N6068A = Ho 727b = K 476a. P. w. N6068 at 2'.
 A1557+35 = Mk 493. Spec. Astrofizika, 10, 485, 1974 (weak Seyfert N).
 N6048 = 4C 70.19 = MCG 12-15-38. P. w. anon. at 2'5 sf.
 N6068 = Ho 727a = K 476b. P. w. N6068A at 2' sp.
 I1155 In Abell 2147. Spec. A.J., 77, 331, 1972.
 A1558+30 = Mk 494. Close pair at 0'5, connected.
 N6028 = I Zw 133. Mag. does not include outer ring struct.

I1165A,B = VV 90. Close pair, connected. In Abell 2147.
Spec. A.J., 77, 331, 1972.
SN1967f. (P.A.S.P., 80, 462, 1968) not confirmed, rejected.

A1559+18 = Mk 294. HI 21 cm. A.&A., 22, 281, 1973.

A1600A,B,C = Arp 324 = VV 159 = III Zw 75. Chain in Abell 2147.
Ptm. V,V-r: A.J., 75, 695, 1970. Isodens. A.J., 77, 331, 1972.
Spec. A.J., 75, 695, 1970; 77, 331, 1972. Nuclei of Galaxies, p.357, 1971.

A1601+19 = Mk 296. (Mk 295 at 1'1 n, fainter).

N6040A,B = Arp 122 = VV 212. P(b) at 0'5. In Her Cl. (Abell 2151) Ident. of comp. A & B reversed from
 P.A.S.P., 83, 320, 1971.
Spec. A.J., 77, 448, 1972.

N6041A,B = VV 213. Close dble at 0'3. I1170 0'9p. In Her Cl. N6041 has mean Vel for both comp.
Dim., Ptm. Ap.J., 173, 485, 1972.

N6044 = I1172. In Her Cl.

N6051 = 4C 24.36 = PKS 1602+24. Brightest in a Cl.
Pres. Coord. A.J., 77, 621, 1972.
Spec. Ap.J.Let., 182, L13, 1973.

N6045 = Arp 71. In Her Cl. F comp. attached 0'5 f.
Ptm. V,V-r: A.J., 75, 695, 1970.

A1602+34 B2 R.S. Dble syst., $m_p = 15.4$.

N6047 = 4C 17.66. In Her Cl.
Radio. Ap.J., 189, 399, 1974. A.&A., 31, 223, 1974.

N6052. = N6064 = Mk 297 = Arp 209 = VV 86. P(c) of Sc in contact (descr. in literature are incorrect).
Photo. P.A.S.P., 81, 637, 1969.
Ptm. P.A.S.P., 81, 637, 1969. Ap.J., 171, 5, 1972.
Spec. P.A.S.P., 81, 637, 1969. Ap.J., 185, 797, 1973.
Sptm. Astrofizika, 7, 389, 1971. Ap. J., 171, 5, 1972.
Radio. P.A.S.P., 86, 649, 1974 (uncertain).

N6050 = Arp 272 = K 481. w. I1179 attached, 0'3 sp. In Her Cl.

I1178, I1181 = Arp 172 = VV 194. Pair at 0'5 in common halo, F, diff. extents. s of I1181.

N6055 Is not = N6053 which is a *. In Her Cl.

I1182 = Mk 298 = VV 220. Jet w. knots 1'3 long following. In Her Cl. Class 2 Seyfert N.
Photo. A.J., 73, 887, 1968. Ap.J., 173, 247, 1972. IAU Symp. 44, p.380, 1972.
Ptm. U,V,B: Ap.J., 171, 5, 1972.
Spec. Ap.J., 173, 247, 1972 (incl. V of emiss. knots in jet).
Sptm. Astrofizika, 7, 389, 1971. Ap.J., 171, 5, 1972.
Radio. Ann.Ap., 28, 380, 1965. Izv. V.U.Z. Radiofizika, 16, 1342, 1973.

I1183 Short jet p. N6054 np. In Her Cl.

I1189 = Mk 300. I1190 3' n is a *.

I1194 Triplet w. I1194A at 1'3 n and I1192 at 1'5 np.

I1195 In Her Cl.
SN1963q and Photo. P.A.S.P., 76, 325, 1964.

A1605+55 = Arp 188 = VV 29. Arms appear to be in different planes. Filam. 2'5 long f.

N6070 = Ho 729a. P. w. Ho 729b,c at 4'3 and 5'5.

A1607+41 = I Zw 134. Poss. SO. $m_p = 15.4$.

N6090 = Mk 496 = I Zw 135 = K 486. Dble system, in contact. 2 obj. 2'6 and 5'6 p, in a chain.

N6086 In Abell 2162. N6085 at 6'7 s.
Ptm. V,V-r: A.J., 75, 695, 1970.

A1610-60 = PKS 1610-60A. E. Note large galactic obscuration.
Spec. Discordant redshift of Source L1 (Aust.J.Phys., 25, 233, 1972) rej.

A1614+47 = Arp 2 = DDO 204. Low surf. br., F bar, emiss. knots.

N6106 P(a) w. small anon. S at 12'.

N6120 = I Zw 141. $m_p = 14.3$. In Abell 2199. N6119 2'3 np.
Spec. A.J., 77, 4, 448, 1972 (incl. vel. of sev. cluster members). P.A.S.P., 84, 589, 1972.

A1619+40 SN1953b. IAU Cir. No.2113, 1968. P.A.S.P., 81, 224, 1969 (w. Photo.)

N6140 Note corr. to NGC R.A. (see DI).

A1620+20 Fairall Compact. Descr., Spec. M.N., 153, 383, 1971.

N6137 = B2 1621+38. In Abell 2199.

A1621+39 In Abell 2199.
SN1964g and Photo. P.A.S.P., 77, 456, 1965.

A1622+54 = I Zw 147. Compact E, $m_p = 15.8$.

A1622+41 = Mk 699 = III Zw 77. e compact on PSS. Mag. and colors reduced using dim. on PSS (0'22 x 0'22).
Photo. Ap.J., 143, 192, 1966. Cat. Selected Compact Galaxies, p.387, 1971.
Ptm. U,B,V: Ap.J.Let., 150, 1177, 1967. No m_B var.: Ap.J., 171, 457, 1972.
Spec. Ap.J., 143, 192, 1966. Pub.A.S.Japan, 24, 239, 1972.
Sptm. Pub.A.S.Japan, 24, 239, 1972.

A1623+41 = I Zw 148. $m_p = 16.0$. In Abell 2197.

A1625+40 = III Zw 78. $m_p = 16.0$. In Abell 2197.

A1625+41 In Abell 2197.
SN1968t. IAU Cir. No.2110, 1968. P.A.S.P., 81, 224, 1969 (w. Photo.)

A1625+20 Fairall Compact. Descr., Spec. M.N., 153, 383, 1971 (broad emiss.).

A1626+38 = I Zw 152. $m_p = 15.4$. In Abell 2199.

N6158 In Abell 2199.

N6160 In Abell 2197.
Spec. A.J., 75, 695, 1970 (where redshift is for N6160; mag. and color are for N6173).
A.J., 77, 4, 1972 (incl. vel. of sev. cluster members).

N6166 = 3C 338. I Zw 153 at 1' sf. Brightest in Abell 2199.
Class., dim. Ap.J., 140, 35, 1964; 173, 485, 1972.
Photo. Ap.J., 140, 44, 1964; 142, 1364, 1965. IAU Symp. 44, p.349, 1972. Cont. Asiago. No.300bis,
p.79, 1973.
Ptm. U,B,V,R: A.J., 75, 695, 1970. Ap.J., 173, 485, 1972; 178, 1, 25, 1972; 183, 731, 1973.
Isodens.: Bull.A.A.S., 5, 447, 1973.
Spec. Vel. of many cluster members; Ap.J., 188, 221, 1974.
Radio. Ap.J., 140, 44, 1964; 142, 106, 1965; 144, 216, 1966; 148, 367, 1967; Ap.J.Let., 191, L11,
1974. Observ., 87, 124, 1967. A.J., 73, 1, 1968. A.&A., 31, 223, 1974; 34, 341, 1974.
X-rays (from Cluster): Ap.J.Let., 185, L13, 1973; 193, L57, 1974.

A1627+17 Fairall Compact. Descr., Spec. M.N., 153, 383, 1971.

A1627+40 = III Zw 82. $m_p = 15.5$. In Abell 2197.

N6173 In Abell 2197. III Zw 83 at 1'7 nf, prob. also cluster member.
Ptm. A.J., 75, 695, 1970 (where mag. and color are also for N6173, redshift is for N6160).

N6181 Photo. Ap.J., 142, 641, 1965.
Spec., dyn., mass. Ap.J., 142, 641, 1965.
Sptm. Ap.J., 163, 259, 1971.
SN1926b. P.A.S.P., 53, 125, 1941. Zs.f.Ap., 49, 202, 1961.

A1631+35 = I Zw 156. Compact w. outer ring struct.

I1222 = Arp 73 = K 500b. sBN. Satellite at end of F arm, 0'9 f. I1221 at 1'2 = K 500a.

A1634+52 = I Zw 159. Pec. dble compact. $m_p = 15.6$.

N6217 = Arp 185. HI 21 cm. A.J., 79, 767, 1974.

N6196 = I4615 = MCG 6-36-58 = UGC 10482. eBN (or * superp?). Brightest in group. Misident. in RNGC.
N6197 (= I4616) at 4'8 sf.

A1636+42A,B = Arp 125 = I Zw 162. Possible "Ring galaxy" w. incomplete, irreg. "crumpled" ring similar
to N2936-7. V = 14.29, B-V = 0.58, U-B = 0.04 (log A = 1.35, source N) for A+B.

N6211 = VII Zw 655. $m_p = 13.8$.

N6207 Ptm. U,B,V: Ap.J., 188, 1, 1974 (vel. of B * near N : 0±100).
Sptm. Sov. A.J., 16, 628, 1973.

N6223 = VII Zw 657. Pec. nucl. reg., large outer struct. $m_p = 13.1$. $m_p = 11$ in MCG, vol.I, 1962.

N6236 $m_p = 12.7$ in CGCG, vol.IV, 1968. $m_p = 13$ in CGCG, vol.I, 1962.

N6215 P. w. N6221 at 18'.

A1647+48A,B = Mk 499, 500. Comp. A = I Zw 166. Pair at 1'7.

A1648+45A,B,C = Arp 103. Zwicky's connected system. A,B at 26", B,C at 140".

A1648+54A,B,C,D,E,F = Arp 330 = I Zw 167. $m_p = 15.5 - 18.5$. Comp.C is brightest. Markarian chain
(Cont. Byurakan Obs., 33, 29, 1963).
Spec. Nuclei of Galaxies, p.351, 1971.

N6221 P. w. N6215 at 18'.

N6239 Small coll. pair at 7'5.
Sptm. Sov.A.J., 16, 628, 1973.
Rot. vel. A.&A., 8, 364, 1970.

N6246, 6246A Note corr. to coord. of comp. A. It is 10' sf N6246.

N6240 = 4C 02.44 = PKS 1650+024.
Spec. Aust. J. Phys., 25, 233, 1972 (emiss.)

A1652+39 = Mk 501 = 4C 39.49. B blue N, ext. compact, but not a Seyfert, no emiss.
 First described as featureless spectrum.
Ptm. Ap.J.Let., 189, 199, 1974.
Spec. Ap.J., 190, 271, 1974; 192, 581, 1974. A.&A.Suppl., 20, 1, 1975.

N6255 In Zwicky 1971. knot on comp. 1'25 f. $m_p = 13.8$. $m_p = 12$ in MCG, vol.II, 1964.

N6275 = Mk 503 = VII Zw 667. $m_p = 15.1$.

A1656+38 = II Zw 75. Star on N. Vel. of F gal. uncertain. See Zwicky 1971.

N6285, 6286 = Arp 293. Pair at 1'5. F extens. f N6286.

A1704+34 = I Zw 173. v compact, $m_p = 15.3$.

A1659+29 = Mk 504. Class 1 Seyfert N.

N6306, 6307 = Ho 769b,a = K 504. Pair at 1'4.
Ptm. 10 col. (N6307): Ap.J., 179, 731, 1973.
Spec. Astrofizika, 10, 477, 1974.

N6314, 6315 Pair at 3'2.

N6340 II251, 1254 at 6'n and 8' nf.

I1254 N6340 at 8' sp.

A1712+59A,B = Arp 32 = VV 89 = K 506. Connected system. Many B emiss. knots. small SB w. B N, 0'7 n of comp. B.

A1717+73 $m_p = 12.9$ in CGCG, vol.IV, 1968. $m_p = 14$ in MCG, vol.I, 1962.

N6359 P. w. small SB(s)b at 11' np.

A1717-00 = 3C 353. Mag. and colors reduced using dim. on PSS (0'45 x 0'45) Class. Ap.J., 140, 35, 1964.
Ptm. U,B,V: Ap.J., 178, 25, 1972.
Spec. Ap.J., 141, 1, 1965.
Radio. Ap.J., 142, 106, 1965; 144, 568, 1966; 147, 24, 908, 1967; 151, 771, 1968; 154, 423, 1968;
 179, 439, 1973. A.J., 71, 927, 1966; 72, 230, 1967; 73, 1, 1968; 76, 211, 1971; 78, 536, 1973;
 79, 903, 1974. Sov.A.J., 9, 238, 537, 1965-66. Ap.Let., 4, 139, 1969.

A1718+49A,B = Arp 102 = VV 10 = K 508. Zwicky's connected gal. at 3'8. Comp. B has F filam. 2'8 long n.
Photo. Ap.J., 148, 321, 1967.

N6361 = Arp 124. Small compact comp. 1'5 sp.

A1719+57 = DDO 208. Draco E dwarf, in Local Group.
Star counts. A.J., 69, 853, 1964.
Struct., Phys. data. A.J., 74, 587, 1969. Ann.Rev. Ast.Ap., 9, p.35, 1971.
Ptm. B*: Ap.J., 193, 321, 1974. Ap. & Space Sc., 14, 323, 1971.
Dist. modulus: A.J., 69, 853, 1964. Ap.J., 193, 321, 1974.
Dyn., mass. A.J., 69, 853, 1964.

A1720+30 = Mk 506 = K 510b. Class 1 Seyfert N. Comp. 0'6 sp = K 510a.
Ptm. U,B,V: Ap.J., 192, 581, 1974.
Spec. Astrofizika, 10, 485, 1974. Ap.J., 192, 581, 1974 (vel. of comp.: 13,500 km s⁻¹).

A1724+45 = I Zw 184. Poss. star superposed. $m_p = 15.3$.

I1258, 1259 = Arp 311, 310 = VV 101. I1259 = K 517, dble syst. in contact. In a group.
Spec. Mean vel. of group, $V_o = 8165$ km s⁻¹; Nuclei of Galaxies, p.351, 1971.

N6381 = K 518b.

N6395 $m_p = 12.8$ in CGCG, vol.IV, 1968. $m_p = 13$ in MCG, vol.I, 1962.

N6384 Photo. Mem.S.A.Ital., 44, 65, 1973 = Cont.Asiago, No.284.
Rot. vel. A.&A., 8, 364, 1970.
SN1971L. IAU Cir. Nos.2336, -39, -43, -50, 1971. Yamanoto Cir. Nos. 1739, -40, 1971.
 Ap.J., 185, 303, 1973. Mem.S.A.Ital., 44, 65, 1973 = Cont. Asiago No.284.

N6412 = Arp 38. Photo. Astrofizika, 6, 367, 1970.
Ptm. Astrofizika, 6, 367, 1970.
HII reg., dist. modulus. Ap.J., 194, 559, 1974.

I4662 Photo. Vistas in Astr., 14, 208, 1972.
Sptm. of HII reg. A.&A., 33, 331, 337, 1974.

N6454 = 4C 55.33.1. In a cluster.
Spec. M.N., 158, 277, 1972.

N6478 = N6466.

N6467 Is not = N6468 (N6468 is a triple *).

A1749+56A,B = I Zw 199, Nos. 1, 2. Connected pair at 20". Total $m_p = 15.2$.
HI 21 cm. Source R2 (A.&A., 23, 253, 1973), quality D, rejected.

N6493 Listed as N6493A in BGC. It is 3'1" nf N6491. F SB(s)d at 4'5" np.
 Coord. in A.&A.Suppl., 12, 89, 1973 is for N6491.

N6503 Photo. Ap.J., 139, 539, 1964.
Ptm. Mem.S.A.Ital., 38, 189, 1967 = Cont. Asiago Obs. No.194. 5 col.: A.J., 73, 313, 1968.
Spec. Ap.J., 139, 539, 1964.
Sptm. Sov.A.J., 16, 628, 1973.
Dyn., rot., mass. Ap.J., 139, 539, 1964. Mem.S.A.Ital., 38, 189, 1967. A.&A., 8, 364, 1970.
HII reg. Ap.J.Suppl., 27, No.239, 1974.

N6500, 6501 = K 526. Pair at 2'3" in a small group.

N6560 Irr. comp. 4'6" p.

A1805+65 Spec. Astrofizika, 10, 477, 1974.

N6555 = Ho 774a. (Ho 774b at 1'8" is a dble *). Note corr. to BGC coord. (NGC coord. are correct, MWC 626 coord. are wrong.)

N6438, 6438A Close pair at 25". Type b "Ring galaxy" w. incomplete, irr. ring edge on.
Photo. Zs.f.Ap., 64, 202, 1966. Ap.J., 171, 253, 1972. IAU Symp. 29, p.403, 1968.
Ptm. Zs.f.Ap., 64, 202, 1966. Atl.Gal.Austr., 1968.
Spec. Ap.J., 171, 253, 1972 (w. corr. to vel. published in Zs. f. Ap., 64, 202, 1966 and IAU Symp.29, p.403, 1968). Ap.J., 194, 569, 1974.

N6574 Photo. Ap.J., 156, 501, 1969.
Spec., rot., mass. Ap.J., 156, 501, 1969; 184, 735, 1973.

N6621. = N6621+6622 = Arp 81 = VV 247 = VII Zw 778 = K 534. P(c) w. long, asym. arm.

N6643 Photo. and Ptm. Astrofizika, 6, 367, 1970.
HII reg. Ap.J.Suppl., 27, No.239, 1974. Ap.J., 194, 559, 1974.
Dist. modulus. Ap.J., 194, 559, 1974.

A1824+34 = I Zw 206. Poss. Lp. $m_p = 15.5$.

N6651 = UGC 11236. Misident. in CGCG, UGC.

N6635 Note corr. to NGC Dec.

A1827+48 SN1953c and Photo. A.J., 75, 672, 1970.

I4719 SN1934a. Harvard Bull., 910, 1939. P.A.S.P., 65, 242, 1953.

I4720, 4721 Pair at 9'.

A1829-41 F comp. at 3' nf.

A1830+55 = I Zw 207. Pec. w. emiss. knots; may be P(c). $m_p = 15.5$.

A1831+54 = I Zw 208. Dble syst. of compacts, $m_p = 14.8$.

N6658, 6661 P(a) at 9'6".

A1834+19 = PKS R.S. Spec. M.N., 158, 277, 1972.

N6690 = N6689.

A1836+17 = 3C 386 = 4C 17.81. Gal. * superposed on N ($V = 19 \text{ km s}^{-1}$).
Prec. coord. Ap.J.Let., 151, L23, 1968.
Descr., class. Ap.J., 140, 35, 1964.
Photo. Ap.Let., 5, 173, 1970; 7, 107, 1970.
Ptm., Spec. Ap.J., 168, 327, 1971.
Radio. Ap.J., 142, 106, 1965; 144, 216, 1966; 148, 367, 1967. A.J., 73, 1, 1968.
Ap.Let., 5, 173, 1970.

N6654A Anon. Sm of v. low surf. br. at 2'5" np.

N6701 $m_p = 12.9$ in CGCG, vol.IV, 1968. $m_p = 13$ in MCG, vol.I, 1962.

N6703 Spec., vel. disp. IAU Symp. 15, p.112, 1962.
Sptm. D. Wells, Univ. of Texas Dissert., Austin, 1972; unpubl.

N6707, 6708 Pair at 6'. In group.

I4796, 4797 Pair at 5'7". In group.

A1852-54 H.A. 85, No.6, = A1853 in BGC. In group.

I4798 SN1971r. IAU Cir. Nos. 2359, 2363, 1971.

A1855+37 B2 R.S. In a cluster. $m_p = 14.9$ in CGCG, vol.III, 1966.

A1903-61 Anon. in group N6769, 6770.

N6744 Descr., class. IAU Symp. 29, p.421, 1968. J.R.A.S.Canada, 68, 117, 1974.
Photo. IAU Symp. 38, p.23, 1970.
Ptm. Atl. Gal. Austr., 1968.
Radio. Aust. J. Phys., 19, 883, 1966.

N6753 2 anon. sp. at 5'9 and 12' sf.
Ptm. Atl. Gal. Austr., 1968. I.R., 1-2.2 μ : M.N., 164, 155, 1973.

N6752 P(a) w. anon. SABO⁻ at 1'2.

I4827 In N6769, 6770 group.

N6758, I4832, 4831, 4837A, 4837, 4839, 4836, 4840 In group.

N6769, 6770 = VV 304. P(b) at 1'9. Brightest members of a group.
Ptm. Atl. Gal. Austr., 1968. I.R. 2.2 μ (up. limit for 6769): M.N., 164, 155, 1973.
Radio. M.N., 167, 251, 1974.

N6671 In group. Ptm. Atl. Gal. Austr., 1968.

I4842, 4845, N6780, 6782, 6776A, 6776, I4852. In a group.

A1922+63 = VII Zw 880. Dble system. $m_p = 16.0$.
Spec. M.N., 153, 383, 1971.

I1302, 1303 Pair at 0'5. In a group. Note large gal. obscuration.

A1930+54 = K 542a.

N6806 = MCG -7-40-3. Descr. P.A.S.P., 83, 310, 1971 (where it is listed as object No.58).

N6810 P. w. large vF gal. 12' sp.
Radio. Aust. J. Phys., 21, 193, 1968.

N6814 Class 1 Seyfert N. $B_T = 15.65$, $B_T(\text{excl. N}) = 12.10$.
Ptm. U.B.V: A.J., 73, 858, 1968. Pub. Dept. A. Univ. Texas, II, 2, No.7, 1968. P.A.S.P., 83, 392.
1972. Atti...Conv. Sci. Osserv. Cima Ekar, Padova - Asiago, p.101, 1973 = Cont. Asiago No.300bis.
I.R. 1-10 μ : Ap.J.Let., 159, L165, 1970; 176, L95, 1972. M.N., 169, 357, 1974.
Spec. Ap.J.Let., 165, L61, 1971.
Sptm. M.N., 168, 109, 1974.
HI 21 cm. Source R2 (A.&A., 6, 456, 1970), quality D, rejected.
Radio. Aust. J. Phys., 19, 565, 1966.

A1940+50 = 3C 402 = 4C 50.49. Dble system.
Ptm. B,V,R: Ap.J., 183, 731, 1973.
Spec. Ap.J.Let., 172, L37, 1972 (+ vel. of 2 comp., $V_o = 7560, 8520 \text{ km s}^{-1}$).
Radio. Ap.J., 144, 216, 1966. A.J., 73, 1, 1968. A.&A., 28, 359, 1973.

N6822 = DDO 209 = I 4895. I1308 is an HII reg. in obj. Local group member.
Photo. A.J., 72, 134, 1967. A.&A., 7, 311, 1970. Ann.Rev. Ast. Ap., 9, 35, 1971. Ap.J., 190, 525, 1974.
Ptm. B,V: B*, var.*, Cephe., A.J., 72, 134, 1967. Ap.J., 191, 603, 1974.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. A.J., 73, S6, 1968. Ap.J., 156, 847, 1969; 190, 525, 1974.
Sptm. A.&A., 7, 311, 1970; 33, 331, 337, 1974. Bull.A.A.S., 5, 349, 448, 1973.
Dist. modulus. Ap.J., 190, 525, 1974.
HI 21 cm. Ap.J., 150, 8, 1967. IAU Symp. 44, pp.12, 67, 1972.

N6835 P(a) w. N6836 at 7'5. SN1962j. and Photo. Mem.S.A.Ital., 36, No.3, 1965 = Cont. Asiago Obs., No.182.

N6836 P(a) w. N6835 at 7'5.

A1954+40, 1955+40 Listed as A1955A,B in BGC. Pair in a group. Note large gal. obscuration.

A1957-47A,B P(b) at 1'3. Comp. B at end of long arm of A. In Klemola Group 30 (A.J., 74, 804, 1969).
2 other comp. 0'8 and 1'7 sf may also be connected. Class from poor reproduction Cerro Tololo 60 in.
plate.
Photo., descr. Ap.J., 183, 19, 1973.
Spec., dyn. rot., mass. Ap.J., 183, 19, 1973.

N6869 $m_p = 12.8$ in CGCG, vol.IV, 1968. $m_p = 14$ in MCG, vol. I, 1962.

N6854 B anon. at 1'9 nf.

N6851A,B Pair of F anon. at 1'5. In a group.

N6861 = I4949. In group w. N6868, 6870 and others.
Photo. M.N., 131, 351, 1966 (incl. N6861D, 6868, 6870).

N6861E,F In a group.

N6875 N6875A at 18' p. Photo. M.N., 131, 351, 1966.

N6878 N6878A at 18' sp. P(a) w. anon. SAO⁻ at 6'8.

A2011-45 In background of N6861, -68 group.

N6872, I4970 = VV 297. P(b) at 1'1.
Ptm. U,B,V: A.J., 74, 335, 1969.
Radio. M.N., 167, 251, 1974.

I4972, N6876, 6877 In a group. N6876, 6877 Pair at 1'45.

N6880, I4981 In a group. Pair at 1'1.

N6890 In group. Spec. Bull.A.A.S., 4, 237, 1972.

N6893 Close pair of anon. S, SO at 19' sf.

N6902B Note corr. to R.A. from BGC.

I5000 = N6901 = I1316. P(a) w. N6906 at 18'.

A2020-44 = HA 88.2, New 5 (Listed as A2021 in BGC). In group w. N6861, 6868, 6870 and others.

I1317 = II Zw 82. Spec. Catalogue of Selected Compacts, 1971, p.307; V = 3955. (inadv. not used in col.28).

N6906 P(a) w. I5000 at 18'.

N6907 = N6908.

N6921 P. w. vF anon. S at 1'5.

N6927A, 6927, 6928, 6930 In N6928 group. N6928, 6930 Pair at 3'7.

N6926, 6929 Pair at 4'0.

N6946 = 4C 59.31.1.
Descr. P.A.S.P., 79, 29, 1967. IAU Symp. 38, pp.29, 87, 1970.
Photo. P.A.S.P., 78, 395, 1966; 79, 29, 1967. Astrofizika, 2, 431, 1966. Ap.J., 154, 845, 1968;
 194, 559, 1974. A.&A., 12, 379, 1971. Pub.U.S.Naval Obs., XX, Part IV, 1971.
Ptm. Astrofizika, 2, 431, 1966; 6, 177, 1970. Pub.U.S.Naval Obs., XX, Part IV, 1971.
 5 col.: A.J., 73, 313, 1968. I.R. 10-21u: Ap.J.Let., 176, L95, 1972.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle 1966. Ap.J., 155, 417, 1969; 194, 559, 1974.
Dist. modulus: Ap.J., 194, 559, 1974.
Interfer. Hq: A.&A., 12, 379, 1971.
SN1917a. P.A.S.P., 29, 180, 213, 1917. Harvard Bull., 641, 1917.
SN1939c. IAU Cir. No.793, 1939. Ap.J., 96, 28, 1942. Ann. Rev. Ast. Ap., vol.2, p.248, 1964.
SN1948b. IAU Cir. No.1172, 1948. P.A.S.P., 65, 242, 1953. Supernovae & SN Remnants, Ap. & Space Sc
 Lib. vol.45, p.204, 1974.
SN1968d. IAU Cir. Nos. 2057, 2072, 1968. Ast. Tsirk. No.456, 1968.
SN1969? IAU Cir. No.2305, 1971. Inf. Bull.V.S.No.515, 1971. Not confirmed.
HI 21 cm. Ap.J., 150, 8, 1967; 154, 845, 1968; 176, 315, 1972. A.J., 73, S95, 1968.
 A.&A., 22, 111, 1973. Sources R (A.J., 69, 490, 1964) and R2 (A.&A., 3, 292, 1969)
 discordant, rejected.
Radio. A.J., 73, 876, 1968. Sov.A.J., 13, 881, 1970. Ap.J., 176, 315, 1972. Proc. 1st European
 Ast. Meeting, vol.3, p.1, 1974.

N6935, 6937 P(a) at 4'5. Photo. A.J., 76, 775, 1971.

N6944A, 6944 Pair at 6'5.

N6951 = N6952.

A2040-26 = PKS R.S. Prob. E m = 13.5?
Spec. Aust. J. Phys., 25, 233, 1972. M.N., 158, 277, 1972.

N6956 m_p = 12 in MCG, vol.III, 1963. m_p = 13.5 in CGCG, vol.V, 1965.

N6962, 6963, 6964 Dense group. N6962, brightest and largest. N6962 and 6964 = K 548.

I5063 = PKS 2048-57. Coord. and Photo. A.J., 79, 453, 1974.
Spec. Aust. J. Phys., 25, 233, 1972.

N6978 In a group of chain of Spirals w. N6975, 6976 and 6977.

N6982, 6984 Pair at 6'.

A2058+16 At 11'6 np N7006.

A2058-28 = PKS R.S. E in a small cluster.
Spec. Aust. J. Phys., 25, 233, 1972. M.N., 158, 277, 1972.

A2058+15 = A2059A in BGC. At 6'8 sp N7006.

I1347 = PKS 2059-13. Spec. Aust. J. Phys., 25, 233, 1972.

A2059+15 = A2059B in BGC. At 7'9 sf N7006.

A2100-48, 2101-48 In a group w. N7014, 7038 and others.

N7013 V is mean of discordant values $V = 570$ (Source G1, A.J., 72, 730, 1967) and $V = 830$ (Source R2, A.&A., 6, 453, 1970). See also Ap.J.Suppl., 28, No.267, 1974.

A2102-47 In a group w. N7014.

N7015 $m_p = 12$ in MCG, vol.III, 1963. $m_p = 13.2$ in CGCG, vol.V, 1965.

A2103-47, N7014 In a group. N7014, brightest.

A2105+03 = II Zw 102 = K 552b. Compact comp. at following end of arm of Sc(= II Zw 101 = K 552a = UGC 11680), total $m_p = 14.5$.

N7029 In small group w. N7041, 7049.

N7042 = K 555a. $m_p = 12$ in MCG, vol.III, 1963. $m_p = 13.0$ in CGCG, vol.V, 1965.

N7038 In group w. N7014.

N7041, 7049 In a small group w. N7029.

N7052 = B2 2116+26. $m_p = 14.0$ in CGCG, vol.VI, 1968.

A2119-46, 2120-46 = A2119, 2120 in BGC. A2120-46 = H.A. 88, 2, New 6.

N7065, 7065A Pair at 4'1.

N7064 Prec. Pos. and Photo. A.J., 76, 775, 1971.

N7070 P(a) w. N7070A at 21' nf, N7072 at 4'5 ssf.

N7072A P(a) w. N7070 at 3'6.

N7072 P(a) w. N7070 at 4'5 np, N7072A 3'6 ssp.
Mag., dim. P.A.S.P., 83, 310, 1971.

N7070A P(a) w. N7070 at 21' sp.
Class. M82 type, Astrofizika, 3, 427, 1967.
Descr., Phys. data. A.J., 79, 1242, 1974.

N7079 Spec. vel. is mean of 2 discordant val. both from Source M1, $V = 3007$ and 2630 , (Observ., 87, 224, 1967; 89, 21, 1969).

A2131+08 = II Zw 140. Pec. compact w. jets; $m_p = 15.6$.

N7090 Ptm. Atl. Gal. Austr., 1968.

N7097 P(a) w. N7097A at 5'9 nf.

N7096 F anon. 1'2 n.

N7097A P(a) w. N7097 at 5'9 sp.

N7107 Prec. Pos. and Photo. A.J., 76, 775, 1971.

N7119A,B Pair in contact, cent. of B at 0'25 sp A.
Prec. Pos. A.J., 76, 775, 1971 (where finding chart is incorr. labeled YC 2148-43; because of poss. confusion prec. coord. have not been adopted).

A2143-21 Capricorn E dwarf system in Local Group (Listed as A2144 in BGC).

I5131 P(a) w. I5135 at 12'.

I5135 Coll.? P(a) w. I5131 at 12' and F anon. spindle, SBm?, at 6'5 f. N7135 at 18' nf.
Spec. Vel. from source G1 (A.J., 72, 730, 1967) was incorr. attributed to N7135. Source L2 (Freeman 1975, private comm.) confirms correct. ident.

N7125, 7126 Pair at 6'3. Anon. SB(rs) at 6'5 s of N7125.

N7135 Long thin comet-tail extens. 2'6 in nf dir. I5135 at 18' sp.
Photo., Ptm. IAU Symp. 29, p.421, 1968 (where quoted vel. applies to I5135).
Spec. vel. from source G1 (A.J., 72, 230, 1967) rejected; publ. value applies to I5135. Source L2 (Freeman 1975, private comm.) confirms correct. ident.

N7144, 7145 P(a) at 23'5.

A2152-69 = PKS R.S. Ptm. U,B,V. A.J., 74, 335, 1969. Ap.J., 178, 1, 1972.

A2153+07 = Mk 516. Poss. Seyfert N. Spec. Astrofizika, 10, 485, 1974.

N7163 In N7163-7176 group.

N7162, 7166 Pair at 11'0.

I1417 P(a) w. N7171 at 12'3 sf.

N7162A P(a) w. N7162 at 14'5 sp.

A2158+10 = Mk 520 Dble system.

- N7177 Sptm. D. Wells, unpub. Univ. of Texas Dissert., Austin, 1972.
SN1960L. P.A.S.P., 73, 175, 1961.
- N7171 P(a) w. I1417 at 12'3 np.
- N7168 P(a) w. anon. EO? at 3'0 sf.
- N7172, 7173, 7174, 7176 Small group or chain. N7174, 7176 P(c) at 0'2. $V = 11.39$, $B-V = 0.97$, $U-B = 0.49$.
($\log A = 1.28$, Source N) for N7174+7176.
Photo., Spec. Ap.J., 191, 645, 1974.
- I5152 B * (HD 209142, $m_p = 7.8$) is 1'2 nf on edge of system.
- N7196 P. w. vs B gal. 1'2 nf.
- N7201, 7203, 7204 Small group or chain. N7202 does not exist (= *?)
Photo., Spec. Ap.J., 191, 645, 1974.
- N7205A P(a) w. N7205 at 8'5.
- N7205 P(a) w. N7205A at 8'5 sp.
- A2204+47 $m_p = 13.3$ Note large gal. obscuration.
- N7217 Photo. P.A.S.P., 78, 495, 1966.
- A2205+04 SN1953i and Photo. P.A.S.P., 86, 516, 1974.
- I5168 P. w. N7214 at 5'2 nf.
- N7214 P. w. I5168 at 5'2 sp.
- A2206+48 $m_p = 13.0$ Note large gal. obscuration.
- A2207+17 = II Zw 168. $m_p = 15.3$
Photo. Spec. Mem. S.A. Ital., 40, 211, 1969 = K.P.N.O. Cont. No.436.
- A2207-22 Listed as A2208 in BGC.
Photo. Stellar Structure, vol.VIII of Stars and Stellar Systems, p.396, 1965.
SN1937b. Stellar Structure, vol.VIII, Stars and Stellar Systems. p.396, 1965. A.N., 290, 85, 1967.
(Error in BGC; no SN1960).
- N7221 $m_p = 12$ in MCG, vol.IV, 1968.
- I5181, N7232A Pair at 8'1.
- N7229 $m_p = 12$ in MCG, vol.IV, 1968.
- N7236, 7237 = Arp 169 = II Zw 172 = 3C 442 = K 564. P(b) at 0'5 in common halo. 3rd comp. 0'6 sf.
 $V = 12.98$, $B-V = 1.05$, $U-B = 0.44$ ($\log A = 1.13$, Source S) for N7236+7237.
Class. Ap.J., 140, 35, 1964.
Ptm. U,B,V,R: Ap.J., 178, 25, 1972; 183, 735, 1973.
Spec. Ap.J., 191, 55, 1974.
Radio. A.J., 73, 1, 1968.
- N7232, 7233 Pair at 2'. N7232: Ptm. U,B,V: A.J., 74, 335, 1969.
- N7232B P. w. N7232 at 5' sp.
- I1441, N7240 Pair at 1'2 in N7242 group.
- I5179, 5186 See Additional Notes.
- N7241 = II Zw 174. Pec. abs. lane. $m_p = 13.8$ P. w. anon. Sc at 5'0 spp.
- N7242 = Ho 789a. (Ho 789b at 0'5 nf = IV Zw 90, $m_p = 16.4$). N7240 3'8 sp. Brightest in a group.
Diam. Ap.J., 173, 485, 1972.
Ptm. B,V,R: Ap.J., 183, 731, 1973.
- A2213+22 = I Zw 93. Multiple system. $m_p = 15.7$.
- N7248 N7250 at 17'5 nf. Sev. gal. nearby.
- N7252 = Arp 226. F filaments and loops around main body of gal.
- I5201 Rich cluster of F gal. at 12' np.
- N7263 = IV Zw 97. Dble system or E + * ? at 0'2. Total $m_p = 15.7$.
- N7259 $m_p = 12$ in MCG, vol.IV, 1968.
- A2220+30A,B = K 567. In Zwicky 1971. Connected pair of blue compacts at 0'25; total $m_p = 14.0$.
- N7274 In a group.
Ptm., Spec. A.J., 75, 695, 1970 (where it is incorrectly ident. as N6049).
- A2222+38. = IV Zw 99. Pec S + compact; $m_p = 15.7$.
Spec. for both comp., $\Delta V = 15 \text{ km s}^{-1}$, A.J., 77, 4, 1972.

N7280 = K 568a.

N7292 SN1964h. IAU Cir. No.1870, 1964. HAC Nos.1658, 1659, 1964. P.A.S.P., 77, 456, 1965 (w. Photo.)

A2228-00 Haro-Luyten obj. 293B. Approx. coord. only.
Photo., mag., spec. Ap.J., 142, 1241, 1965.

N7298 P(a) w. N7300 at 11'3.

A2228+33 Dwarf magellanic near Stephan's Quintet (see N7320 and comp.)
HI 21 cm. Ap.J., 187, 19, 1974.

N7300 P(a) w. N7298 at 11'3 sp, N7302 at 21'5 sf.

A2229+39 = 3C 449 = 4C 39.69. Prec. coord. Ap.J.Let., 151, L75, 1968.
Ptm. B,V,R: Ap.J., 178, 25, 1972; 183, 731, 1973.
Spec. Ap.J.Let., 150, L145, 1967.
Radio. A.&A., 34, 341, 1974.

A2229+19 = Mk 306. In contact w. Mk 305, compact and fainter.

N7302 = I5228. P(a) w. N7300 at 21'5 np.
Radio. A.J., 75, 523, 1970.

N2573A,B Nearby N2573 at 3h 54, -89°52'. Note large precession.

N7309 Photo. Astrofizika, 4, 59, 1968.

A2231+32 = DDO 213. In N7331 group. Dist. modulus, A.&A., 35, 441, 1974.
HI 21 cm. A.&A., 23, 43, 1974.

N7313, 7314 Pair at 4'3. N7314 = Arp 14.

N7316 = Mk 307. Radio. P.A.S.P., 86, 649, 1974; uncertain.

N7317 = Arp 319 = VV 288 = Ho 792d. In Stephan's Quintet.
Photo. See N7318A,B.
Ptm. Astrofizika, 3, 209, 1967.

N7318A,B = Arp 319 = VV 288 = Ho 792c. Coll. pair in Stephan's Quintet.
Photo. Ap.J.Let., 178, L101, 1972. Ap.J., 183, 411, 1973. IAU Symp. 44, p.388, 1972. IAU Symp. 58, p.238, 1974.
Ptm. Astrofizika, 3, 209, 1967. Isodens.: Ap.J., 183, 411, 1973.
HII reg. Ap.J., 183, 411, 1973.
HI 21 cm. up. limit and Dist. modulus. Ap.J.Let., 189, L1, 1974. Bull.A.A.S., 5, 430, 1973.

N7319 = Arp 319 = VV 288 = Ho 792b. In Stephan's Quintet.
Photo. and Ptm. See N7318A,B.
SN1971p. IAU Cir. No.2355, 1971. Ap.J., 183, 411, 1973. Supernovae & SN Remnants, Ap. & Space Sc. Lib. vol.45, pp.25, 89, 1974.
HI 21 cm. and Dist. modulus. A.&A., 25, 319, 1973. Ap.J., 187, 19, 1974. Bull.A.A.S., 5, 430, 1973.
Radio. Nature, 239, 324, 1972; 241, 260, 1973.

N7320 = Arp 319 = VV 288 = Ho 792a. In N7331 group and foreground of Stephan's Quintet?
Photo. and Ptm. See N7318A,B.
HII reg. Ap.J., 183, 411, 1973.
Dist. modulus. Ap.Let., 7, 111, 1970. Supernovae & SN Remnants, Ap. & Space Sc. Lib., vol.45, p.73, 1974. IAU Symp. 58, p.237, 1974. A.&A., 35, 441, 1974.
HI 21 cm. A.&A., 7, 330, 1970; 25, 319, 1973. Ap.J., 187, 19, 1974. Bull.A.A.S., 5, 430, 1973.
Radio. M.N., 166, 11P, 1974. A.&A., 33, 343, 1974.

A2233-03 = Arp 3 = DDO 214. Low surf. br., F N.

N7320C At 4'1 nf N7320. Outlying member of Stephan's Quintet?
Photo. See N7318A,B.
Spec. Ap.J., 185, 797, 1973. IAU Symp. 44, p.376, 1972 (+ vel. of other background obj. around Stephan's Quintet and N7331).

N7331 = Ho 795a. Brightest in a group and in foreground of a group of F gal.
Photo. Ap.J., 141, 758, 1965; Ap.J.Let., 178, L101, 1972. P.A.S.P., 78, 495, 1966. A.&A., 29, 249, 1973. Stellar Structure, vol.VIII of Stars and Stellar Systems, p.395, 1965. IAU Symp. 44, p.388, 1972.
Ptm. 5 col.: A.J., 73, 313, 1968. U,B,V: Ap.J., 157, 55, 1969.
Spec. Ap.J., 141, 759, 1965. Vel. of background gal.: IAU Symp. 44, p.376, 1972.
Sptm. A.&A., 27, 433, 1973. Sov.A.J., 16, 628, 1973.
Pol. Astrofizika, 4, 409, 1968. Ap.J.Let., 170, L53, 1971.
Dyn., rot., mass. Ap.J., 141, 759, 1965; 184, 735, 1973. Vest. Leningrad No.1, p.140, 1969.
A.&A., 8, 364, 1970.
HII reg. Ap.J., 183, 411, 1973.
SN1959d. Stellar Structure, vol.VIII of Stars and Stellar Systems, p.395, 1965. M.N., 158, 375, 1972.
Ap.J., 182, 225, 1973. Supernovae & SN Remnants, Ap. & Space Sc. Lib., vol.45, p.91, 1974.
HI 21 cm. and Dist. modulus. A.&A., 25, 319, 1973; 35, 441, 1974. Halo search: A.&A., 28, 95, 1973; (not detec.).
Radio. Ap.J., 144, 553, 1966; 150, 413, 1967. Ap.J.Let., 174, L111, 1972; 182, L17, 1973. A.&A., 29, 249, 1973; 31, 447, 1974; 33, 343, 1974. M.N., 166, 11P, 1974.

N7332 = Ho 796a = K 570a. P(a) w. N7339 at 5'0.
Ptm. 5 col.: A.J., 73, 313, 1968.
Spec., vel. disp. Ap.J., 174, 489, 1972. Bull.A.A.S., 3, 399, 1971.
Rot., mass. (In Cent.) Ap.J., 174, 489, 1972.

N7335 = Ho 795c. In group of gal. in background of N7331.

N7337 In group w. N7335.? SN1973. IAU Cir. Nos. 2573, 2578, 1973.

N7339 = Ho 796b = K 570b. P(a) w. N7332 at 5'0.

A2236+35 In a group. Ptm. and Spec. A.J., 75, 695, 1970.

N7343 22's, 20'f N7331. No new obs. to confirm that H.M.S. vel. (Source B) refers to this object (see BGC, p.215).
SN1974. IAU Cir. Nos. 2707, 2714, 1974.

A2237+34 SN1960k. and Photo. P.A.S.P., 73, 175, 1961.

A2237-02 = II Zw 183. SBC, $m_p = 14.0$.

I5243. = II Zw 185 = K 571b. v close pair of compacts, $m_p = 14.3$. I5242 = K 571a at 2'8.

N7361 Note corr. to NGC R.A.

A2240+29 = B2 R.S. $m_p = 14.4$

A2240+31 = IV Zw 111. Poss. SO. $m_p = 16.0$.

N7371 = Ho 797a. (Ho 797b at 1'0 is a *).

N7383 P(a) w. N7385 at 5'6 f. In a cluster.

N7385 = 4C 11.71 = PKS 2247+11. Brightest in a cluster.
Diam. Ap.J., 173, 485, 1972.
Ptm. B,V,R: Ap.J., 178, 1, 1972; 183, 731, 1973. A.J., 74, 335, 1969.
Radio. Ap.J., 157, 481, 1969. A.J., 78, 18, 1973. IAU Symp. 44, 222, 1972.

N7386 P(a) w. N7385 at 5'8. In cluster.
Spec. M.N., 158, 277, 1972 (w. ident. changed from N7385 to N7386).

N7389, 7387 Pair at 3'. In cluster.

A2251+31 = IV Zw 122. $m_p = 14.7$.
Spec. Cat. Selected Compact Galaxies, 1971 (V adopted is mean from emiss. and abs.)

A2251+32, 2252+32 = IV Zw 123a,b. Pair 2'7. $m_p = 15.7, 16.3$.

N7410 Photo. M.N., 131, 351, 1966.

N7413 QSO (3C 455) at 23" nf ($z = 0.543$; Ap.J.Let., 171, L41, 1972).
Photo., Prec. coord. Ap.J.Let., 171, L41, 1972.
Ptm. U,B,V,R: Ap.J., 178, 25, 1972; 183, 731, 1973. Isodens.: IAU Symp. 58, p.203, 1974.
Bull.A.A.S., 5, 397, 1973.
 Mag. and colors reduced using dim. on PSS (0'60 x 0'40).

N7418 P(a) w. N7421 at 19'5. Obj. listed as N7418A in BGC at $\sim 16'$ n has been rejected, only a F elliptical + plate defect.
Photo. M.N., 131, 351, 1966.
Radio. Aust. J. Phys., 19, 883, 1966.

I5264 Note corr. to IC coord. P. w. I1459 = I5265.

N7421 P(a) w. N7418 at 19'5.
Photo. M.N., 131, 351, 1966.
Ptm. Atl. Gal. Austr., 1968.

I5267 Photo. M.N., 131, 351, 1966. Note corr. to IC Dec.

I1459 = I5265. P. w. I5264 sp.
 Mag. and colors reduced using dim. on PSS (4'5: x 3'4:).

N7424 Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967.
Photo. M.N., 131, 351, 1966.
Ptm. Atl. Gal. Austr., 1968.

N7417 = PKS 2253-65? Prob. Ident.: A.J., 75, 667, 1970.

I5269, 5270 Pair at 11'. Note corr. to IC coord. for I5270.

A2255-04A,B,C = Arp 314 = VV 295. Comp. A and B are high surf. br. spirals at 1'7. Comp. C, 1'3 s of B, is a low surf. br. magellanic syst. and could be in foreground. Another low surf. br. SB at 4'2 sf comp. B, from which a F connecting (?) filam. emerges.

I5273 Note corr. to IC coord. Photo. M.N., 131,351, 1966.

N7443, 7444 Pair at 1'6.

N7448 = Arp 13. Photo. and Ptm. Astrofizika, 6, 367, 1970.
HI 21 cm. M.N., 150, 337, 1970 (mass only, no vel.)

A2257+25 = B2 R.S., $m_p = 15.6$

A2257+26 = IV Zw 128. Pec. $m_p = 16.5$.

A2258+16 = Mk 312. 6'1 sp N7454.

N7457 P. w. s anon. spindle at 8'.
Ptm. Isodens.: A.J., 79, 671, 1974.

N7454 P. w. anon. SB(s)c at 1'7 sp. Mk 312 at 6'1 sp.

N7463, 7464 = Ho 802a,c. Pair at 0'8. In triple syst. w. N7465.

N7465 = Mk 313 = Ho 802b. Triplet w. N7463, 7464. SN1950, not confirmed.

N7462 Radio. Aust. J. Phys., 19, 883, 1966.

N7468 = Mk 314.
Spec., Sptm., HI 21 cm. A.&A., 41, 61, 1975.
Radio. P.A.S.P., 86, 649, 1974.

N7469 = Arp 298 = Ho 803a = K 575a. P(a) w. I5283 at 1'3 nf. Class 1 Seyfert N. $B_H = 14.7 - 15.5$,
 $B_T(\text{excl. N}) = 12.80$.
Photo. Pub. Dept. A. Univ. Texas, II, 2, Nr 7, 1968.
Ptm. Nucl. and total mag.: A.J., 73, 858, 1968. Pub. Dept. a. Univ. Texas, II, 2, Nr 7, 1968.
Att...Conv. Sci. Osserv. Cima Ekar, Padova-Asiago, p.101, 1973 = Cont. Asiago No.300 bis.
U.B.V: Ap.J.Let., 150, L177, 1967. Ap.Let., 1, 171, 1968. Sov. A.J., 16, 763, 1973; 17, 169,
1973. M.N., 152, 759, 1971; 169, 357, 1974. I.R. 1-21u: A.J., 73, 870, 1968. Ap.J.Let., 159,
L165, 1970; 176, L95, 1972. M.N., 169, 357, 1974.
Spec. Ap.J.Let., 171, L37, 1972. Ap.J., 182, 369, 1973; 192, 581, 1974.
Int. motions: Ap.J.Let., 171, L37, 1972. Ap.J., 182, 369, 1973.
Sptm. Ap.J.Let., 154, L53, 1968. Ap.J., 162, 743, 1970; 164, 1, 1971. A.&A., 27, 433, 1973; 33,
331, 337, 1974. Sov. A. J., 11, 767, 1967. Ast. Tsirk. No.467, 1968. M.N., 168, 109, 1974.
IAU Symp. 28, p.83, 1968. Nuclei of Galaxies, p.151, 1971.
Pol. Ap.J., 151, 71, 1968. Astrofizika, 4, 409, 1968; 7, 417, 1971; 8, 509, 1972.
Ast. Tsirk. No.454, 1967.
Rot., mass (in Nucl.): Ap.J., 182, 369, 1973.
Radio. Aust. J. Phys., 19, 565, 1966. A.J., 73, 876, 1968. A.&A., 33, 351, 1974.

I5283 = Arp 298 = Ho 803b* = K 575b. P(a) w. N7469 at 1'3.

A2301+22 = Mk 315 = II Zw 187. Class 1 Seyfert N.
Descr., class. A.J., 76, 1000, 1971.
Spec. Ap.J., 186, 433, 1973; 192, 581, 1974.
Mag. and colors reduced using dim. on PSS (0'45 x 0'40).

N7479 Rot. vel. A.&A., 8, 364, 1970.

I5285 = II Zw 188. Compact w. outer ring struct. $m_p = 14.4$. P. w. N7489 (Sc) at 8'6 nf.

N7495 SN1973. IAU Cir. Nos. 2571, 2576, 1973.

N7496 Ptm. 2.2u: (Up. limit), M.N., 165, 155, 1973.
Sptm. A.&A., 33, 331, 337, 1974.

N7499, 7501 Pair at 2' in Pegasus II Cl.
N7501: Radio. A.J., 189, 399, 1974.

N7503 = 4C 07.61 = PKS 2308+07. In Pegasus II Cl.
Diam. Ap.J., 173, 485, 1972.
Ptm. U.B.V.R: Ap.J., 173, 485, 1972; 178, 1, 1972; 183, 731, 1973.
A.J., 74, 335, 1969 (+ 2 comp. in Table IV that may be N7499, 7501 but no prec. ident.).

N7507, 7513 Pair at 18'.

N7518 = Mk 527. P. w. large S spindle (= UGC 12423) at 6'6 n.

N7537, 7541 = Ho 805b,a = K 578. Pair at 2'7. Photo. Astrofizika, 4, 59, 1968.

N7541 Spec. Astrofizika, 4, 59, 1968.
Radio. Aust. J. Phys., 21, 193, 1968.

A2312+07 SN1964k and Photo. P.A.S.P., 77, 456, 1965.

N7547, 7549, 7550 = Arp 99. Triple syst. N7549, w. 2 F outer arms interacting w. N7550 at 4'6.
Spec. A.J., 77, 4, 1972 (w. corrected ident.)

N7564 SN1972m and Photo. P.A.S.P., 85, 427, 1973.

N7552 = I5294 = PKS 2313-428. Descr., class. P.A.S.P., 77, 287, 1965; 79, 152, 1967.
Photo. P.A.S.P., 77, 287, 1965.
Ptm. I.R., 1-10.6u: M.N., 162, 35P, 1973; 164, 155, 1973. Ap.J.Let., 191, L19, 1974.
Spec. Observ., 87, 38, 225, 1967.
Sptm. A.&A., 33, 331, 337, 1974.
Radio. Aust. J. Phys., 19, 883, 1966.

- N7562, 7562A Pair at 2'3. N7557, E? at 4'5 np N7562.
- N7578A,B = Arp 170 = VV 181. In Abell 2572. Close pair at 0'5 in common envel. 2 other gal. at 0'4 and 1'2 nf.
- N7576 P. w. N7585 at 10'7.
Radio. Aust. J. Phys., 19, 565, 1966.
- N7580 = Mk 318. Radio. P.A.S.P., 86, 649, 1974.
- N7585 = Arp 223. P(a) w. N7576 at 10'7. F extend. envel.
- N7587 = K 580.
- N7582 = PKS 2315-426. In group w. N7590, 7599 at 9'5 and 13'.
Photo. M.N., 131, 351, 1966. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Atl. Gal. Austr., 1968. I.R. 1-3.5u: M.N., 162, 35P, 1973; 164, 155, 1973.
Radio. Aust. J. Phys., 19, 883, 1966. Proc. A.S. Austr., 2, 159, 1972.
- N7592 Coll. pair, 2 N 0'25 apart.
- N7597 P. w. N7602 at 5'. In Abell 2572.
Spec. A.J., 77, 4, 1972 (w. corrected ident.)
- A2316+24 = Mk 319 = K 581a.
- N7590 In group w. 7582, 7599. P(a) w. N7599 at 4'9 sf.
Photo. M.N., 131, 351, 1966. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Atl. Gal. Austr., 1968. I.R. (up. limit): M.N., 154, 155, 1973.
- N7602 P. w. N7597 at 5'. In Abell 2572.
Spec. A.J., 77, 4, 1972 (w. corrected ident.).
- N7603 = Mk 530 = Arp 92. Class 1 Seyfert N. Connected to compact comp. 0'9 sf with extr. discordant redshift. Descr. Isodens. Ap.J.Let., 194, L125, 1974.
Photo. Ap.Let., 7, 221, 1970. IAU Symp. 44, p.387, 1972.
Spec. Ap.Let., 7, 221, 1970; V of comp. = $16,900 \text{ km s}^{-1}$, Ap.J., 192, 581, 1974.
Astrofizika, 10, 485, 1974.
- N7606 SN1965m. IAU Cir. No.1934, 1965. Ast. Tsirk., No.349, 1965.
Spec. A.&A., 35, 151, 1974.
- N7599 In group w. N7583, 7590. P(a) w. N7590 at 4'9.
Photo. M.N., 131, 351, 1966. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Atl. Gal. Austr., 1968.
- N7609 = Arp 150 = VV 20. Ep. Poss. A comp. of ring gal. w. incomplete outer ring. F Spindle at 1' sp and pec Sb at 1'2 sf.
SN1973m? and Photo. P.A.S.P., 86, 516, 1974; the obj. is visible on 200 inch pl. PH-40232 in Arp Atlas (1966) and maybe an HII reg.
- N7619 Brightest in Pegasus I Cl. w. N7611, 7615, 7623, 7626, 7631.
Photo. Mem. S. A. Ital., 44, 65, 1973 = Cont. Asiago Obs. No.284.
Ptm. B,V,R: Ap.J., 178, 1, 1972; 183, 731, 1973. 10 col.: Ap.J., 179, 731, 1973.
SN1970j. IAU Cir. No.2279, 1970. Ast. Tsirk. No.590, 1970. Yamamoto Cir. No.1726, 1970.
Mem.S.A.Ital., 44, 65, 1973 = Cont. Asiago Obs. No.284.
- N7625 = Arp 212 = VV 280 = III Zw 102.
Photo. Ap.J., 157, 69, 1969; 186, 445, 1973. Cat. Selected Compact Galaxies, p.387, 1971.
Ptm. Ap.J., 186, 445, 1973. Bull.A.A.S., 5, 349, 1973.
Spec., rot., mass. Ap.J., 157, 69, 1969.
HI 21 cm. A.J., 79, 767, 1974.
- N7626 = PKS 2318+07. 2nd brightest in Peg. I Cl.
Diam. Ap.J., 173, 485, 1972.
Ptm. U,B,V: A.J., 74, 335, 1969. Ap.J., 178, 1, 1972.
10 col.: Ap.J., 179, 731, 1973.
Spec. Ap.J.Let., 164, L35, 1971. vel. disp.: IAU Symp. 15, p.112, 1962.
Pol. Ap.J.Let., 179, L93, 1973.
Dyn., mass. Ap.J., 139, 284, 1964.
Radio. Ap.J., 157, 481, 1969; 189, 399, 1974. A.J., 75, 523, 1970. Ap.Let., 6, 49, 1970.
M.N., 149, 91, 1970.
- N7634 SN1972j. IAU Cir. No.2437, 1972.
- N7640 Descr. Vistas in Ast., 14, p.210, 1972.
Photo. Ap.J., 184, 343, 1973.
Dyn., rot., mass. Bull.A.A.S., 1, 186, 1969. A.&A., 8, 364, 1970. Vistas in Ast., 14, 239, 1972.
HII reg., dist. modulus. Ap.J., 194, 559, 1974.
HI 21 cm. Ap.J., 150, 8, 1967; 184, 343, 1973. Halo search: A.&A., 28, 95, 1973 (not detect.).
- A2320+32 = B2 R.S. Pec. asym. arm. $m_p = 14.5$.
- N7648 = Mk 531 = I 1486. F comp. at 4'9 nnp.
- N7649 In Abell 2593. Ext. halo.
Diam. Ap.J., 173, 485, 1972.
Ptm. U,B,V,R: Ap.J., 173, 485, 1972; 178, 1, 1972; 183, 731, 1973.

N7671, 7672 Pair at 6'.

N7673 = Mk 325 = IV Zw 149 = K 584a. P. w. N7677 (= Mk 326) at 6' sf.
Photo. Ap.J., 160, 405, 1970. Nuclei of Galaxies, p.81, 1971.
Ptm. Isodens. Cont. Asiago Cont.No.300 bis, p.79, 1973.
Spec., Sptm., HI 21 cm. A.&A., 41, 61, 1975.

N7674 = Mk 533 = Arp 182 = VV 343. Compact E comp. attached at 0'5 nf. N7675 at 2'2f.
Spec. Astrofizika, 10, 485, 1974 (poss. weak Seyfert).
Radio. M.N., 167, 251, 1974.

N7675 P. w. N7674 at 2'2 p. (= Arp 182).

A2325+24 = IV Zw 150. Pec. compact. Poss. filam. connect. to F comp. 1'3 sp.
Spec. Mem.S.A.Ital., 40, 211, 1969 = K.P.N.O. Cont. No.436. Mem.S.A.Ital., 41, 129, 1970.

N7677 = Mk 326 = K 584b. P. w. N7673 (= Mk 325) at 6' np.
Spec., Sptm., HI 21 cm. A.&A., 41, 61, 1975.

N7678 = Arp 28. One arm v massive and brighter.

A2326+14 = DDO 216. Pegasus dwarf. IV Zw 152 at 2' sf, $V = 20640 \text{ km s}^{-1}$, $m_p = 16.0$.
Photo. IAU Symp. 29, p.55, 1968. Cat. Selected Compact Galaxies, p.378, 1971.
HI 21 cm. Source R2 (A.&A., 3, 292, 1969), quality D, rejected.

A2326+17 = 4C 16.83. N7681 at 1'2 p. Pec. SO(= UGC 12620) at 5'0 nf.

N7679, 7682 = Arp 216 = VV 329. P(b)? at 4'5. N7679 (= Mk 534) has F extens. w. brighter condens.
Spec. Ap.J., 142, 634, 1965.
Sptm. Ap.J., 159, 809, 1970.
Radio. M.N., 167, 351, 1974.

A2327+25 = III Zw 107 = IV Zw 153. Close pair of compacts. Total $m_p = 15.0$
Photo. Ap.J., 160, 405, 1970. Nuclei of Galaxies, p.81, 1971.

I5328A, 5328 Close pair at 0'75.

I5328B at 14' ssf I5328.

A2331+29 = Arp 46 = VV 314 = K 586a. Connected comp. = K 586b 0'5 nf.
SN1953e and Photo. P.A.S.P., 83, 307, 1971. The SN is visible on 200-inch pl. PH-4284 in Arp Atlas (1966).

N7713 P. w. N7713A at 19' nf.
Spec. Discordant $V = 2921$, Source N2 (Observ., 87, 38, 1967), rejected.

N7714 = Mk 538 = Arp 284 = VV 51 = Ho 810a = K 587a. P(b) w. N7715 at 1'9.
Photo. A.J., 73, 890, 1968. Ap.J., 153, 31, 1968.
Ptm. I.R., 2-10 μ : Ap.J.Let., 159, L165, 1970; 176, L95, 1972. Bull.A.A.S., 4, 223, 1972.
Spec., rot., mass. Ap.J., 153, 31, 1968.
HI 21 cm. A.J., 79, 767, 1974.
Radio. N7714+7715: M.N., 167, 251, 1974.

N7715 = Arp 284 = VV 51 = Ho 810b = K 587b. P(b) w. N7714 at 1'9.
Photo. and Radio. See N7714 for ref.

I5337 Pair w. I5338 at 1'3 f. In Abell 2626.

I5338 = 3C 464 = 4C 20.57. P. w. I5337 at 1'3. In Abell 2626.
Prec. coord. A.J., 77, 621, 1972.
Photo. M.N., 166, 101, 1974.
Radio. M.N., 166, 101, 1974 (v steep spec.).

N7713A P. w. N7713 at 19' sp.

A2335+29 = Mk 328. In Zwicky 1971. $m_p = 15.5$
Spec. Mem.S.A.Ital., 40, 211, 1969 = K.P.N.O. Cont. No.426.
HI 21 cm. (up. limit): A.&A., 8, 424, 1970.

A2335+31 SN1953f and Photo. P.A.S.P., 83, 307, 1971.

A2335+30 = B2 R.S. $m_p = 15.1$.

N7720 = 3C 465 = 4C 26.64 = K 588. Brightest in a cluster (Abell 2634).
Descr., class., dim. Ap.J., 140, 35, 1964; 173, 485, 1972. P.A.S.P., 80, 129, 1968. Proc. 1st European Ast. Meet., vol.3, p.37, 1974.
Photo. Ap.J., 140, 44, 1964. Ap.Let., 14, 7, 1973.
Ptm. U.B.V.R: Ap.J., 178, 1, 25, 1972; 183, 731, 1973. A.J., 75, 695, 1970.
Isodens.: Ap.Let., 14, 7, 1973.
Spec. Ap.J., 141, 1, 1965; 191, 55, 1974. A.J., 75, 695, 1970.
Radio. Ap.J., 140, 35, 1964; 142, 106, 1965. A.J., 73, 1, 1968; 75, 71, 1969. A.&A., 28, 359, 1973.
M.N., 164, 271, 1973. IAU Symp. 29, p.347, 1968.

I5342 In Abell 2634. Incl. in one of the comp. of 3C 465. Coord. in A.&A.Supp1., 12, 89, 1973 is for N7720.
SN1961n and Photo. P.A.S.P., 74, 215, 1962.

N7721 = Ho 812a. (Ho 812b at 2' is a *).
Dyn., mass. Bull.A.A.S., 1, 186, 1969.

N7727 = Arp 222 = VV 67. vF smooth outer arms. P(a) w. N7724, SB(s)ab, at 12'.
 A2338-02 = III Zw 114. $m_p = 16.6$.
Spec. Cat. Selected Compact Gal., 1971.
 A2338+26 SN1969k and Photo. P.A.S.P., 82, 736, 1970.
 N7731, 7732 = K 590. Pair at 1'6. N7732 is a late-type spir. of low surf. br., probably in foreground.
Photo. and Spec. Cat. Selected Compact Gal., p.388, 1971.
 A2339-03A,B = Arp 295 = VV 34. P(b) at 1'5. Note corr. coord. from BGC. Wrong ident. in Arp (1966);
 this syst. is not I1505 which is $\sim 6'$ np.
Ptm. P.A.S.P., 86, 639, 1974 (bridge and tail).
Spec., rot., mass. Ap.J.Let., 190, L47, 1974.
Dyn., encounter model. Ap.J., 178, 623, 1972.
 A2340-45 = HN 2871. Listed as A2340 in BGC.
 A2340+19 = Mk 330. 2 F comp. 2' and 2'2 np. $m_p = 14.6$.
 N7741 = K 589b. Descr., class. P.A.S.P., 81, 51, 1969. Vistas in Ast., 14, p.210, 1972.
Photo. Izv. Crimean Obs., 45, 162, 1972. Vistas in Ast., 14, p.204, 1972.
Ptm. 7 col.: Izv. Crimean Obs., 45, 162, 1972. IAU Symp. 44, p.62, 1972.
Rot., mass. Vistas in Ast., 14, p.239, 1972.
HII reg., dist. modulus. Ap.J., 194, 559, 1974.
HI 21 cm. Discordant S_H of Source R1 (A.J., 73, 945, 1968) rejected.
 N7738 = N7739, $m_p = 14.4$.
 N7744 = I5348?
 I1508 = MCG 2-60-16.
 N7750 $m_p = 12.5$ in MCG, vol.III, 1963. $m_p = 13.8$ in CGCG, vol.V, 1965.
 N7752, 7753 = Arp 86 = VV 5 = IV Zw 165 = Ho 816b,a = K 591. P(b) at 2'0.
Photo. A.&A., 3, 418, 1969. Ap.Let., 13, 161, 1973.
Spec. A.&A., 3, 418, 1969. Ap.Let., 13, 161, 1973 (Source K5). Vel. disagree. for N7753 betw.
 Sources D (A.J., 67, 360, 1962) and K5.
Rot. mass. (N7753), Ap.Let., 13, 161, 1973.
 N7757 = Arp 68 = Ho 817a. N7756 (= Ho 817b) at 4'5 is a *: Detached F comp. (in background ?).
 N7764 Photo., Ptm., Spec. Bol. A.A.Argentina, No.16, 3, 1971.
 N7768 N7767 at 3'7 sp. In Abell 2666.
Ptm., Spec. A.J., 75, 695, 1970.
SN1968z. A.J., 76, 756, 1971.
 N7769 = Ho 820c = K 592a. P(a) w. N7770 at 5' sf, N7771 at 5'4 sf.
 N7770 = Ho 820b. P. w. N7769 at 5', N7771 at 1'1.
 N7771 = Ho 820a = K 592b. P(a) w. N7770 at 1'1, N7769 at 5'4.
Radio. Aust. J. Phys., 19, 565, 1966.
 A2348+20 = Mk 331 = K 593b. 2 F comp. 1'3 and 2' sp.
 N7764A Note corr. to Dec. of BGC. Interacting pair of Sp and Ip.
Prec. coord. and Photo. A.J., 76, 775, 1971.
Mag. P.A.S.P., 83, 310, 1971.
 N7779, 7780, 7782 In a group. N7782 brightest.
 N7783 = Arp 323 = VV 208 = K 595. Comp. at 0'6 sf in common envel. Other comp. form chain.
Spec. Mean V_0 of group; +7932; Nuclei of Galaxies, p.356, 1971.
 N7785 Sptm. D. Wells, Univ. of Texas Dissert., Austin, 1972; unpub.
 I1515, 1516 = K 597. Pair at 4'4.
 A2355+47 = 4C 47.63. Prec. coord. A.&A., 11, 1, 1971.
 N7793 Photo. J.R.A.S.Canada, 68, 117, 1974.
Ptm. Atl. Gal. Austr., 1968. I.R., 1-10.6 μ : M.N., 164, 155, 1973. Ap.J.Let., 191, L19, 1974.
HII reg. Atlas and Catalogue, Univ. Washington, Seattle, 1966. Ap.J., 155, 417, 1969.
Interfer. Ha in disk: A.&A., 12, 379, 1971.
 I1525 = MCG 8-1-16. $m_p = 12$ in MCG, vol.I, 1962. $m_p = 13.3$ in CGCG, vol.VI, 1968. Misident. in MCG.
 N7798 = Mk 332. $m_p = 12.7$.
 N7800 $m_p = 12.5$ in MCG, vol.III, 1963. $m_p = 13.4$ in CGCG, vol.V, 1965.
 A2357+47 $m_p = 12$ in MCG; vol.I, 1962. $m_p = 14.0$ in CGCG, vol.VI, 1968.
 N7805, 7806 = Arp 112 = VV 226 = K 602. N7805 = Mk 333. P(b) at 0'9. Other pec. comp. at 0'9 f.

A2359+23A,B = VV 254 = III Zw 125, Nos.1,2 = K 603. P(b) at 1'2.

Photo. Ap.J., 138, 1306, 1963. A.J., 73, 890, 1968.

Spec., dyn., mass. Ap.J., 138, 1306, 1963.

A2359-15 = DDO 221. Wolf-Lundmark-Melotte System. Dwarf Im in Local Group.

Photo. Vistas in Ast., 14, p.222, 1972.

HI 21 cm. Ap.J., 150, 8, 1967.

ADDITIONAL NOTES:

A1034-27A In Hydra Cl. (Abell 1060).

N3311 In Hydra Cl. (Abell 1060). P. w. N3309 at 1'7.

Spec. A.J., 75, 695, 1970 (where redshift is for N3311, mag. for N3309).

N3589 $m_p = 12$ in MCG, vol.I, 1962. $m_p = 14.5$ in CGCG, vol.IV, 1968.

I5179, 5186 Note corr. of +2.5 min and +2' to IC coord. which are in error for both objects.

I5179 is the brighter of the two and is the gal. listed as I5186 in HA 88.2;

Mem. R.A.S., 68, 69, 1961 and BGC. It is correctly ident. in Helwan 38.

I5186 is the barred Spiral listed as I5179 in BGC with wrong coord.

APPENDIX A

Identification of A Objects in MCG, UGC, and BGC

APPENDIX A. IDENTIFICATION OF ANONYMOUS OBJECTS.

A(RBGC)	MCG	UGC	A(BGC)	A(RBGC)	MCG	UGC	A(BGC)	A(RBGC)	MCG	UGC	A(BGC)
A0001+21	4-01-013	6		A0229+38	6-06-054	2014		A0704+61	10-11-002	3685	
A0001+14	2-01-017	17		A0230+33	5-07-007	2023		A0705+53	9-12-040	3690	
A0002-07	-1-01-028			A0230+40	7-06-032	2034		A0705+71	12-07-028	3697	
A0016-19	-3-01-027	A0005		A0231+29	5-07-015	2053		A0706+71	12-07-032	3714	
A0017+10	2-01-033	191		A0232+37	6-06-062	2069		A0708+73	12-07-035	3730	A0708
A0021+14	2-02-005	226		A0232+59		A0034		A0713+63	11-09-041	3828	
A0022+14		233		A0233+23	4-07-014	2079		A0720+58	10-11-039	3838	
A0022+29B	5-02-011	262		A0234+34	6-06-068	2103*	A0235	A0722+72	12-07-038	3838	
A0024+39		279		A0234+20		2119		A0722+30		3841*	
A0025+30A	5-02-016	279		A0235+02	0-07-061	2119		A0724+40	7-16-003	3860	
A0026+02	0-02-045	286*	A0026	A0235+29	5-07-023	2122		A0727+63	11-09-053	3889	
A0027+11	-2-02-030			A0236+18A	3-07-037	02140	A0236	A0727+73	12-08-003	3889	
A0028+10	-2-02-038			A0236+18B	3-07-038	02140*		A0729+66		A0134	A0733
A0028+08	1-02-018	312*		A0237+01	0-07-077	2162		A0730+73	12-08-007	3909	
A0029+31	5-02-022	319		A0237+34	-6-07-001	0	A0237	A0733+63A			
A0031+31	5-02-025	334		A0238+59		0	A0039	A0733+02		A0134	
A0031+31	-5-02-016	A0006		A0238+15	-3-07-052			A0733+63B	11-10-011		
A0033+10	-2-02-064			A0243+15	3-08-007			A0734+42	7-16-008	3933	
A0034+25	4-02-036	367		A0244+22	-4-07-039			A0736+48	8-14-031	3949	
A0035+34	-6-02-022A		A0035	A0244+37	6-07-009	2259		A0738+40	7-16-011	3966	
A0035+14	2-02-025	386		A0245+02	0-08-017			A0738+49	8-14-033	3973	
A0038+01	0-02-125	439		A0245+26	4-07-024	2272		A0739+16	3-20-010	3974	
A0039+18	-3-02-041			A0245+03		2275		A0739+70	12-08-010	3984	
A0043+11	-2-03-009			A0246+18	3-08-017	2296		A0741+29	5-19-001	3995	
A0044+32	5-03-001	484		A0246+01	0-08-023	2302		A0743+61	10-11-138	4013	
A0044+50	8-02-015	486		A0247+00	0-08-025			A0743+74	12-08-011	4014	
A0045+20A	-4-03-010		A0045A	A0248+04	1-08-008			A0743+59	10-11-142	4020	
A0045+20B	-4-03-013		A0045B	A0249+01	0-08-035	2345		A0744+28	5-19-015		
A0045+10	-2-03-016	A0014		A0253+27	-5-09-004			A0744+74	12-08-013	4028	
A0046+12	-2-03-019		A0046	A0255+05	1-08-027			A0745+56A	9-13-066		
A0047+21	-4-03-019	A0015		A0255+54			A0255	A0745+56B	9-13-071		
A0049+16	-3-03-006			A0301+25	-4-08-021	A0050		A0746+34		4045	
A0051+73			A0051	A0305+31	-5-08-018			A0747+30	5-19-017	4047	
A0052+19	-3-03-007			A0311+25	-4-08-051	A0061		A0748+74	12-08-018	4057	
A0054+23	4-03-023	591		A0312+04	-1-09-021			A0751+55	9-13-030	4079	
A0054+43	7-03-011	594*		A0313+31	5-09-008	2627		A0752+39	7-17-001		
A0055+48	8-02-021	600		A0316+26	-4-08-057	A0064		A0754+58	10-12-046	4121	
A0055+36	6-03-003	602		A0325+02	0-09-086	2748		A0756+33	6-18-005	4132	
A0056+19	-3-03-011			A0325+17	-3-09-045	A0073		A0756+16	3-21-004	4139	
A0057+33	-6-03-015		A0058	A0326+39	7-08-014	2755		A0758+61	10-12-062	4169	
A0058+07	1-03-011	634		A0327+04	-1-09-043			A0804+39		4229	
A0102+06	-1-03-085		A0103	A0331+39	6-08-034	2783		A0804+04	1-21-014		
A0103+31	0-04-047	673		A0340+39	6-09-009	2836		A0805+76	13-06-018	4238	
A0106+01	0-04-008	711		A0343+70	12-04-004	2855		A0805+12		4242	
A0107+32	5-03-075	724		A0350+72	12-04-007	2890		A0807+46	8-15-047	4260	
A0107+42	7-03-019	725		A0410+29	5-10-012	2989		A0811+58	10-12-111	4289	
A0107+49		731		A0423+70	12-05-003	3042		A0813+70	12-08-033	4305	A0814
A0111+42	7-03-024	783		A0423+69		3046*		A0814+21	4-20-013	4308	
A0112+32	-5-04-020			A0429+01	0-12-042	3080		A0815+20	4-20-017	4324	
A0113+32	-5-04-027			A0430+05	1-12-009	3087		A0817+21	4-20-025	4332	
A0115+11	2-04-019	833		A0434+10	-2-12-045			A0817+21	4-20-030	4344	
A0117+07	1-04-019	855		A0437+04	1-12-016	3128	A0438	A0818+16	3-22-002	4350	
A0118+15	2-04-029		A0118	A0441+74	12-05-018	3144		A0819+74	12-08-039	4363	
A0118+12	2-04-030	891		A0446+00	0-13-014	3174		A0820+22	4-20-043	4375	
A0120+34		940*		A0447+03		3179		A0823+21	4-20-051	4399	
A0123+06	-1-04-044	A0017		A0447+29	-5-12-003	A0095		A0824+55		4417	
A0123+31	5-04-059			A0449+17	-3-13-017			A0825+42	7-18-004	4426	
A0124+31	5-04-060	1033		A0450+25	-4-12-019	A0098		A0825+17	3-22-014	4433	
A0124+18	3-04-041	1032		A0453+20	-3-13-029			A0825+52		A0140	
A0127+25	4-04-011	1073		A0456+04	1-13-012	3223		A0826+52	9-14-047	4438	
A0132+04	1-05-005	1133		A0456+05	1-13-013	3224		A0827+52	9-14-049	4442	
A0135+07	1-05-013	1167		A0500+16		3234		A0828+52	9-14-053		
A0137+15		1176		A0503+70	12-05-028	3245		A0828+75	13-06-025	4451*	
A0140+12	2-05-012	1200		A0504+17	-3-13-072			A0829+19A	3-22-017	4457	
A0141+11	2-05-015	1209		A0505+16	-3-14-001			A0829+66	11-11-013	4459	
A0141+16	3-05-013			A0508+02	0-14-010	A0102		A0832+30	5-20-028		
A0141+02	0-05-033	1214		A0508+84	14-03-008	3257		A0834+51A	9-14-078	4499	
A0143+43	-7-04-032		A0143	A0508+31	-5-13-011	A0103		A0834+51B		4499*	
A0145+16	-3-05-021			A0509+14	-2-14-004	A0104	A0509	A0835+02	0-22-025	4508	
A0145+12		1260		A0510+33		A0106		A0835+53	9-14-081	4514	
A0145+12	-2-05-050			A0513+06	1-14-016	3274		A0841+20	-3-23-001		
A0147+13	-2-05-057			A0516+21	-4-13-009	A0109		A0842+37	6-19-021	4572	
A0149+17	3-05-022	1329		A0521+76	13-04-021	3302		A0843+49	8-16-029	4587	
A0149+36	6-05-032	1347		A0524+69			A0524	A0846+72	12-09-023	4623	
A0151+36	6-05-044	1385		A0526+16	-3-14-017			A0847+76	13-07-007	4623	
A0152+06	1-05-048	1395		A0527+73	12-06-006	3317		A0847+61	10-13-025	A0146	
A0155+02	6-06-009	1449		A0540+75	13-05-007A	3371		A0847+73			
A0156+08	-1-06-012			A0551+78	13-05-009	3373		A0854+66		4687	
A0158+08	1-06-027	1498		A0553+68	11-08-002	3379		A0855+06	1-23-013	4703	
A0200+21	4-05-043	1547		A0553+03		A0116		A0858+60	10-13-052	4730	
A0200+18		1546		A0558+28	-5-15-002	A0117		A0901+51	9-15-083	4749	
A0206+35	6-05-088	1651		A0559+21	-4-15-004			A0905+06	1-24-003	4797	
A0208+05	1-06-051	1669		A0600+07		3393		A0907+22	-4-22-003	A0148	
A0208+06	4-06-052	1670		A0608+69	12-06-017	3416		A0908+46	8-17-053	4829	
A0211+03	1-06-056	1716		A0609+71A	12-6-0180	3422		A0908+08	-1-24-001	A0150	
A0212+07	-1-06-077			A0609+71B	12-06-019	3426		A0908+14	-2-24-001		
A0217+00	0-07-001	1794		A0613+26		A0122		A0909+35	6-20-042	4837	
A0217+06	1-07-002	1803		A0617+59A	10-09-016	3445		A0909+74	12-09-032	4841	A0909
A0218+39A	6-06-023	1810		A0617+59B	10-09-017	3446		A0909+79	13-07-020	4847	
A0218+39B	6-06-024	1813	A0218B	A0618+16	-3-17-001			A0910+17	3-24-011		
A0220+41	7-06-002	1840		A0618+20	-3-17-002	A0128		A0910+19	3-24-012	4858	
A0220+42	7-06-003	1841		A0621+74	12-07-003	3460		A0910+35	6-20-048		
A0221+35	6-06-028	1865		A0625+74	12-07-005	3471		A0911+16	3-24-014	4864	
A0222+36	6-06-029			A0635+75		A0130		A0911+47	8-17-063	4870	
A0223+21	-4-06-040	A0031		A0637+53	9-11-023			A0911+39	7-19-040	4871	
A0223+10	-2-07-007			A0638+65	11-09-008	3511		A0912+59	10-13-071		
A0224+24	-4-06-041	A0032		A0643+66	11-09-013	3539		A0913+74	12-09-034	4883	
A0224+22	7-06-044			A0648+27	4-16-007			A0913+53		A0154	
A0226+31	5-06-051	1963		A0648+27	5-16-010			A0914+53	9-15-114	4906	
A0228+10	-2-07-026			A0650+69	12-07-022	3580		A0915+45	8-17-072	4919	
A0228+39	6-06-049	1993		A0650+80	13-05-035	3581		A0915+11	-2-24-007		A0916
A0228+01	0-07-030	1995		A0700+56	9-12-027	3647		A0917+71	12-09-041	4951	

APPENDIX A. IDENTIFICATION OF ANONYMOUS OBJECTS.

A(RBGC)	MCG	UGC	A(BGC)	A(RBGC)	MCG	UGC	A(BGC)	A(RBGC)	MCG	UGC	A(BGC)
A0917-12	-2-24-011			A1045-50	8-20-028			A1202-18B	3-31-037	7074	
A0918-12	-2-24-012			A1046-26	4-26-009			A1203-09	2-31-028	7085	
A0919-47	8-17-086			A1046-52	9-18-032	A0219		A1203-31A	5-29-010	7085A	A1203A
A0919-22	-4-22-009	A0162		A1046-65	11-13-039	5918		A1203-31B	5-29-011	7086A	A1203B
A0921-17	-4-22-005			A1047-01	0-28-018	5943		A1204-17	3-31-041	7194	A1205
A0922-24	-4-23-001			A1047-19	3-28-017	5947		A1204-40		A0271	
A0923-19	3-24-058	5023		A1048-44	8-20-033	5953		A1205-67		A0272	
A0923-68	12-09-049	5028		A1048-28	5-26-022	5958		A1206-47	8-22-073		
A0926-56	9-16-024	5055		A1049-59	10-16-018			A1207-17	3-31-049		
A0927-49		5063		A1050-50	8-20-037	5998		A1208-70		7168	
A0930-55A		A0166		A1050-07		5999		A1208-40	7-25-046	7175	
A0930-55B		A0166		A1052-59	8-20-046	6029		A1208-50		7176	
A0936-71	12-09-059	5139	A0936	A1055-24		6058*		A1208-02	0-31-036	7178	
A0936-04A	-1-25-009		A0937A	A1059-45	8-20-069	6103		A1208-03	1-31-024	7185	
A0936-04B	-1-25-010		A0937B	A1101-41	7-23-019		A1101	A1208-18	3-31-062	7186	
A0936-04C	-1-25-008		A0937C	A1102-29	5-26-046	A0225		A1209-29	5-29-035		
A0936-04D	-1-25-012		A0937D	A1102-45	8-20-083			A1209-37	6-27-027	7207	
A0936-04E	-1-25-011			A1103-20	3-28-057	6151		A1211-16	3-31-077	7230	
A0936-32A	6-21-072	5146		A1103-48		6156*		A1212-13	2-31-056	7249	
A0936-32B	6-21-071	5146		A1103-57	10-16-061			A1212-36A		A0276	
A0937-47	8-18-022	5157		A1104-18A	3-28-062	6175	A1105A	A1212-36B	6-27-039	7257	
A0937-21		5165*		A1104-18B	3-28-063	6175	A1105B	A1212-06	1-31-030		A1213
A0938-08	-1-25-015			A1107-24A	4-26-036	6204	A1107A	A1213-34	-6-27-012		
A0939-76	13-07-036	A0171		A1107-24B	4-26-037	6207	A1107B	A1213-11	-2-31-026		
A0940-66	11-12-022	5188		A1107-28A	5-27-001	6218*		A1214-29	5-29-048	7300	
A0940-05	-1-25-031	A0173A		A1108-09	-2-29-009	A0228		A1214-11	-2-31-028	A0277	
A0941-05	-1-25-032	A0174		A1109-55		A0229		A1215-17	3-31-096	7331	
A0942-31	-5-23-010	A0180		A1110-53	9-19-006	6251		A1215-44	7-25-055	7340	
A0942-09	2-25-030	5215		A1110-65	11-14-011	6256		A1216-04	1-31-050	7354	A1217
A0943-46	8-18-030	5225		A1110-22	4-27-005	6253	A1111	A1218-46	8-23-013	7408	
A0943-54A	9-16-043			A1111-57	10-16-089			A1219-41	7-26-001	7416	
A0943-54B	9-16-044			A1111-56	10-16-093			A1221-00	0-32-004		
A0943-01	0-25-014	5228		A1112-28	-5-27-010			A1221-04	1-32-046		
A0944-64	11-12-026	5246		A1113-34	-6-25-014			A1221-67		A0280	
A0944-58	10-14-041	5243		A1115-01	0-29-011	6311		A1223-58	10-18-045	7534	
A0946-07	-1-25-047			A1115-28	5-27-053	6322		A1223-48	8-23-035	A0281	
A0946-55		A0184		A1117-02	0-29-017			A1224-37	6-27-055	7559	
A0947-28	5-23-040			A1117-02	1-29-030	6345		A1225-43	7-26-006	7577	
A0947-31	5-23-041	5272	A0947	A1119-69	12-11-020	6378		A1225-44A	8-23-038	7593	
A0949-01	0-25-024	A0186		A1122-13	-2-29-027			A1225-44B	8-23-039	7593	
A0949-43	7-22-073	5295		A1122-38	6-25-066	6429		A1226-43	7-26-017	7599	
A0950-36	-6-22-024			A1122-54	9-19-073	6433		A1226-02	1-32-077	7612	
A0952-08	2-25-056			A1122-23	4-27-034			A1229-29	5-30-014	7613	
A0953-60A	10-14-053			A1123-64	11-14-025	6448		A1229-66A		7683*	
A0953-60B	10-14-054			A1124-35	6-25-072			A1230-09	2-32-124		A1230
A0953-69	12-10-012	5336		A1124-79	13-08-058	6456		A1230-47	8-23-052		
A0953-46	8-18-044			A1125-26	-6-25-020			A1230-37	6-28-008	7699	
A0953-29	5-24-008	5340	A0956	A1127-22	4-27-049	6495		A1230-31	5-30-016	7698	
A0956-54	9-17-004	5369		A1127-58	10-17-007			A1231-02	0-32-021	7710	
A0957-05	1-26-005	5373	A0957	A1129-71	12-11-028	6514	A1129				
A0958-14	-2-26-012			A1129-62	11-14-028	6520		A1232-06	1-32-107	7739	A1232
A1000-59	10-15-004	5408		A1129-53	9-19-111	6527	A1130	A1232-48	8-23-061		
A1001-66		5428		A1129-53E	9-19-113	6527*		A1235-07	1-32-118	7795	
A1001-13	2-26-022	5425		A1130-63	11-14-030	6534		A1235-35	-6-28-008		A0291
A1003-29	5-24-011	A0201		A1130-55		A0239		A1236-56			
A1004-10	2-26-024	5456		A1130-49	8-21-053	6541		A1237-09	-1-32-035		
A1004-53	9-17-027	5459		A1134-20A	3-30-019	6583		A1238-28A	5-30-055		
A1004-52	9-17-028	5460		A1134-20B		6583*		A1240-30A	5-30-063		
A1005-29	5-24-017	5464		A1135-07	-1-30-013			A1240-30B	5-30-063	7891	
A1005-12	2-26-027	5470		A1137-46	8-21-089	6628		A1241-05	-1-33-001		
A1006-30	5-24-020	5478	A1006	A1137-28	5-28-010	6637		A1241-55A	9-21-034	7905	
A1008-25	-4-24-019	A0204		A1138-35	6-26-016			A1241-55B	9-21-033	7905	
A1008-59	10-15-026	5491*		A1139-18	3-30-053	6670		A1241-00	0-33-007	7911	
A1008-58		A0206		A1140-59	10-17-049	6682		A1242-34	6-28-024	7916	
A1008-04	-1-26-030	A0205	A1009	A1142-59	10-17-061	6732		A1242-28	5-30-070	A0294	
A1008-13	-2-26-039			A1144-03A	-1-30-032			A1242-20	-3-33-003		
A1009-67		5494		A1144-03B	-1-30-033		A1145A	A1242-56	9-21-037	7922	
A1012-44	7-21-034			A1144-03C	-1-30-034		A1145C	A1243-05	-1-33-003		
A1013-45		A0208		A1145-55	9-19-195	6774		A1243-71		A0296	
A1015-64	11-13-018			A1146-28	-5-28-007	A0247		A1244-48	8-23-092	A0297	
A1018-37	-6-23-022			A1146-24	4-28-057	6782		A1244-26	5-30-079		A1244
A1019-46	8-19-023	5604		A1147-52	9-19-209	6802		A1244-51	9-21-047	7950	
A1020-71	12-10-032	5612		A1147-26	4-28-060	6806		A1244-36	6-28-030	7949	
A1020-18	3-27-014			A1148-56	10-17-086	6816		A1245-27A	5-30-084	7959	A1245
A1021-15	3-27-020	5633		A1148-39	7-24-035	6817		A1245-27B	5-30-088		A1246A
A1022-55	9-17-064			A1149-52	9-20-019	6840		A1246-04	-1-33-011		
A1023-13	2-27-012	5644		A1150-04	-1-30-043			A1246-34	6-28-032		
A1023-14	3-27-031	5646		A1151-46	8-22-028			A1246-47	8-23-094		
A1023-56		A0211		A1152-06	1-30-020	6886		A1246-41A			A1248A
A1023-44	7-22-006			A1152-55A	9-20-031			A1246-03	-1-33-014		
A1025-19	3-27-042			A1152-55B	9-20-030			A1246-09	-2-33-015		A1247
A1026-70B	12-10-045	5692		A1153-31	5-28-049	6900		A1246-41B	-7-26-054		A1248B
A1026-70A	12-10-044	5688		A1154-55	9-20-037	6919		A1247-27	5-30-094		A1248B
A1029-54	9-17-070	5720		A1154-49	8-22-046	6930		A1247-03	1-33-017	7982	
A1031-11		5737		A1155-14A	-2-31-007	A0256		A1247-41	-7-26-058		A1248C
A1032-46		5744		A1155-14B	-2-31-006	A0258		A1247-10	-2-33-020		
A1032-44		5747		A1155-51	9-20-050	6956		A1248-52	9-21-054	7993	
A1033-24	-4-25-024	A0212		A1155-22	-4-28-008	A0257		A1248-28	5-30-101		A1249
A1033-31	5-25-025	5764		A1155-38	6-26-063	6955		A1248-25	-4-30-030		
A1034-17	-3-27-021			A1156-53	9-20-048	6969	A1157	A1248-40	-7-27-002		A1248D
A1034-64		5776		A1156-52	9-20-051	6983		A1250-06	-1-33-033		
A1034-27B	-4-25-043			A1159-62	11-15-010	7009		A1250-40	-7-27-008		
A1035-44	8-20-002			A1200-41	7-25-014	7020		A1250-10	2-33-032	8015	
A1037-27	-5-25-032			A1200-64	11-15-012	7020A		A1251-11	-2-33-047	A0307	
A1039-23	-4-25-058	A0215		A1200-16	3-31-025	7032*		A1252-03	2-33-035	8032	
A1039-48	8-20-016	A0216		A1201-60	10-17-133			A1252-00	0-33-021	8041	A1253
A1039-34	6-24-006	5829		A1201-01	0-31-025			A1254-57	10-19-004	8058	
A1040-20	4-25-044	5833		A1201-29	5-29-002	7041		A1254-32	6-28-044		A1255
A1041-60	10-16-002	5846		A1201-01	0-31-028	7053		A1255-02	1-33-031	8074	
A1045-11	2-28-008	5897		A1202-27	-5-29-005	A0267		A1255-28	5-31-032		
A1045-66	11-13-038A	5904		A1202-18A	3-31-038	7073		A1255-27B	5-31-038	8080	

APPENDIX A. IDENTIFICATION OF ANONYMOUS OBJECTS.

A(RBGC)	MCG	UGC	A(BGC)	A(RBGC)	MCG	UGC	A(BGC)	A(RBGC)	MCG	UGC	A(BGC)
A1255+15	3-33-017	8081		A1426+27	5-34-048			A1836+17	3-47-010		
A1255+03	1-33-032	8084		A1427-34	-6-32-009			A1852-54			A1853
A1256+14	2-33-041	8091		A1427+22	4-34-039			A1855+37	6-41-024		
A1256+09	2-33-042	8093		A1427+44	7-30-018	9324		A1906+42	7-39-013	11406	
A1256+27C	5-31-057			A1428+27	5-34-061			A1930+54	9-32-007	11453	
A1257+33	6-29-010			A1430+79	13-10-020	9355		A1940+50	8-36-002	11465	
A1258-06	-1-33-068			A1433+59	10-21-011	9391		A1945+18	3-50-004	A0416	
A1258-15	-2-33-088			A1433+57	10-21-013	9405		A1951+57	10-28-015	11492	
A1258-04	-1-33-070			A1436-08	-1-37-010			A1954+05	1-51-001	11498	
A1258+64		A0317		A1442+08		9500		A1954+40	7-41-001		A1955A
A1259+48	8-24-024			A1443+08A	2-38-003	9509	A1444	A1955+40	7-41-002		A1955B
A1300-17	-3-33-030	A0320		A1443+08B	2-38-003	9509		A2004+29	-5-47-023		
A1301-03	0-33-028	A0322	A1302	A1443+08C	2-38-004	9509*		A2009+05	1-51-009	11524	
A1302-07	-1-33-082			A1446-09	-2-38-016			A2015-39	-7-41-025		
A1302+32	5-31-123	8179		A1446-09	-2-38-017		A1447	A2020-44	-7-42-001		A2021
A1303-17	-3-33-032			A1448+07.	1-38-006			A2022+05	1-52-006	11555	
A1304+28	5-31-132			A1448+35	6-33-002	9560		A2024+02	0-52-011	11562	
A1304+67	11-16-010	8201		A1449+35	6-33-004	9562		A2029-02	0-52-032	11585	
A1306+62	10-19-040	8234		A1450-19	-3-38-023			A2044+13	-2-53-003		
A1307-15			A1306	A1450+74	12-14-013			A2047+16	3-53-003	11638	
A1307-07	-1-34-010			A1455-06	-1-38-012			A2058+16	3-53-009		A2058
A1307+34	6-29-048	8246		A1456+53	9-24-060			A2058+15	3-53-010		A2059A
A1308+03	1-34-005	8263	A1309	A1459+52	9-25-005	9663		A2059+15	3-53-012		A2059B
A1309+84	14-06-016	8264		A1508+67	11-18-030	9749		A2101-21	-4-49-010		
A1309+21		8273		A1511-15	-2-39-007		A1511	A2105+03		11680*	
A1309+17	-3-34-014			A1513+10	2-39-009	9794		A2109-01	0-54-004	11695	
A1309+26	5-31-153			A1514+43	7-31-048			A2117+13	2-54-020	11721	
A1310-32	-5-31-032	A0334	A1310	A1514+07		9799		A2119+46			A2119
A1310+36	6-29-061	8303	A1311	A1515-23	-4-36-007			A2120-46			A2120
A1311+46	8-24-090	8308		A1516+42.	7-31-054A		A1516	A2125-38	-6-47-004		
A1312+46	8-24-093	8320		A1517-36	-6-34-002			A2143-21	-4-51-013	A0421	A2144
A1312+35	6-29-065	8323		A1520+29	5-36-025	9831		A2148+25	4-51-006	11830	
A1313+47	8-24-097	8331		A1522+58	10-22-013	9837		A2158+10.	2-56-005	11871	
A1313+25	-4-31-016	8333		A1523+16	3-39-026	9846		A2204+47	8-40-001	11909	
A1313+07	3-41-013			A1524+55	9-24-005	9846		A2205+04	1-56-015	11915	
A1316-08	-1-34-014			A1531+46	8-28-038	9893		A2206+40	7-45-014	11919	
A1316+42	7-27-058	8365		A1534+38A	7-32-030	9922		A2206+48	8-40-002	11920	
A1317+52	9-22-049			A1534+38B	7-32-031	9922		A2207-19	-3-56-009	A0426	
A1318+10	2-34-008	8385		A1535+44	7-32-039	9936		A2207-22	-4-52-018		A2208
A1318+56	10-19-060			A1535+55		A0410		A2209-00	0-56-013		
A1320+53	9-22-054			A1539+00	0-40-008	9979		A2209+46	8-40-003	11946	
A1321-24		A0352		A1547+81	14-07-029	10054		A2214+21	-4-52-018	A0427	
A1323+58	10-19-070	8441		A1548-16		10061		A2218+47	8-40-006	11991	
A1323+21	-4-32-017	A0356		A1554+42		10099		A2218+33	5-52-012	11994	
A1323+57	10-19-072			A1555+30	5-38-004	10104		A2220+30A		12011	
A1324+20	3-34-033	8448		A1556+26	5-38-006			A2220+30B		12011	
A1324+26	5-32-020			A1557+35	6-35-017	10120		A2227+36	6-49-024	12056	
A1324+32	5-32-019	8451		A1558+30	5-38-009	10128		A2228+33	6-49-025	12060	
A1326+31	5-32-028	8466		A1559+18		A0411		A2229+39	6-49-029	12064	
A1327+45	8-25-011	8489		A1600+16A	3-41-051	10143*		A2229+19	3-57-015	12066	
A1328+31	5-32-035	8502		A1600+16B	3-41-052	10143*		A2231+32	5-53-006	12082	
A1331+69		A0362		A1600+16C	3-41-054	10143		A2233-03	-1-57-016		
A1332-33	-5-32-043			A1602+34	6-35-031			A2236+35	6-49-058	12127	
A1332+34A	6-30-045	8561*		A1605+55	9-24-056	10214		A2236-05	-1-57-019	A0433	
A1332+34B	6-30-046	8561		A1607+41	7-39-040	10310		A2237+11	2-57-000	12134	
A1333+29	5-32-041	8578		A1614+47	8-30-002	10310		A2237+34	6-49-058		
A1333+46	8-25-023	8588		A1615+52	9-27-007			A2237-02	-1-57-021		
A1334+46	8-25-025	8597		A1616+59	10-23-056	10331		A2237+37	6-49-069	12137	
A1334+07	1-35-020	8614		A1616+63		10334		A2239+19	3-57-031		
A1335+33	-5-32-055			A1619+40	7-34-001	10349		A2240+29	5-53-012	12163	
A1335+09	-2-35-010			A1623+41		10379*		A2242+06	1-58-004	12178	
A1337+43	7-28-045			A1625+41	7-34-035			A2243+37	6-50-003	12181	
A1337+40	7-28-046	8651		A1627+40	7-34-082			A2251+31	5-54-003	12231*	
A1338+54	9-22-091	8658	A1339	A1631+35	6-36-051			A2255-04A	-1-58-009		
A1339+30		A0372		A1634+01	0-42-006	10465		A2255-04B	-1-58-010		
A1340+39	7-28-055	8683		A1634+52		A0412		A2255-04C	-1-58-011		
A1340+61	10-28-008	8684		A1636+42A	7-34-127	10491		A2255+02	0-58-015	12271	
A1342+56	9-23-004	8696		A1636+42B		10491		A2258+09	1-58-022		
A1344+34A	6-30-083	8715	A1345A	A1639+58	10-24-021	10510		A2300+32	5-54-029	12323	
A1344+34B	6-30-081	8713	A1345B	A1646+62	10-24-055	10561		A2302+16	3-58-032	12350	
A1345+34	6-30-085	8718		A1647+48A		10565*		A2310+10		12416	
A1345-30	-5-33-014			A1647+48B		10565*		A2312+07	1-59-019		
A1346+31	5-33-002			A1648+45A	8-31-003		A1648A	A2316+24	4-55-001	12490	
A1346+26	5-33-005			A1648+45B	8-31-003		A1648B	A2320+32	5-55-008	12570	
A1348+38	6-30-105			A1648+45C	8-31-003A		A1648C	A2324+17		A0439	
A1349+40	7-29-002			A1648+53A	9-27-091			A2326+14	2-59-046	12613	A2326
A1350+64.	11-17-009	A0375		A1648+53B	9-27-092			A2326+17	3-59-060	12620*	
A1351+69	12-13-022	8823		A1648+53C	9-27-094			A2327+40	7-48-007	12632	
A1352+15	3-35-037	8827		A1648+53D	9-27-096			A2331+29	5-55-036	12665	
A1352+54	9-23-017	8837	A1353	A1648+53E	9-27-095			A2332+17	3-60-007	12682	
A1353+18	3-36-001	8839		A1652+39	7-35-002	10599		A2334+00	0-60-022	12709	
A1355+29A	5-33-028			A1653+53	9-28-007	10608		A2335+29		A0441	
A1355+29B	5-33-029			A1656+38		10635		A2335+31	5-55-042	12711	
A1357+45	-7-29-005		A1358	A1659+29	5-40-026			A2335+30	5-55-044	12713	
A1358-11	-2-36-002			A1712+59A	10-24-107	10770		A2338+26	4-55-043	12733	
A1359+37	6-31-044			A1712+59B	10-24-107	10770		A2338-13	-2-60-010		
A1401+11	2-36-026	8972		A1717+73	12-16-028	10803		A2339-03A	-1-60-021		A2339A
A1402-00	0-36-017	8994		A1717+14	2-44-002	10805		A2339-03B	-1-60-022		A2339B
A1402+09	2-36-031	8995		A1718+49A	8-31-041	10814*	A1718A	A2340+45			A2340
A1407-01	0-36-022			A1718+49B	8-31-043	10814	A1718B	A2340+19	3-60-020	12747	
A1409+52	9-23-053			A1719+57	10-25-008	10822	A1719	A2341-06	-1-60-026		
A1413+16	3-36-098	9126		A1720+30	5-41-012			A2342+06	1-60-031	12767	
A1413+23	4-34-009	9128		A1749+56B	9-29-039			A2346+25	4-56-011	12791	
A1416-26	-4-34-010			A1749+56A	9-29-040			A2346+05	1-60-038		
A1417+09	2-37-001	9169		A1755+32	5-42-018	11058		A2348+00	0-60-055	12810	
A1420+15	3-37-010	9206		A1759+06	1-46-003	11093		A2348+20	3-60-036	12812*	
A1420+45	8-26-029	9211		A1805+35	6-40-005	11124		A2355+47	8-01-013	12862*	
A1420+33	6-32-014	9214		A1807+38	6-40-008	11132		A2357+47	8-01-018	12889	
A1422+26	5-34-033			A1827+48	8-33-045	11252		A2359+23A	4-01-010	12914	
A1422+44	8-26-030	9240		A1829+41	-7-38-003			A2359+23B	4-01-011	12915	
A1423+56	9-24-005	9245		A1834+30	5-44-006	11291		A2359-15	-3-01-015	A0444	A2359
A1425+36	6-32-036	9262		A1834+19	3-47-008	11294*					

APPENDIX F

**Finding Lists of Arp, Markarian,
and Vorontsov-Velyaminov Peculiar or
Interacting Galaxies**

F1. LIST OF OBJECTS IN ARP'S "ATLAS OF PECULIAR GALAXIES".

A 1 N2857	A 82 N2535.2536	A148 A1101.41	A222 N7727	A289 N3981
A 2 A1614.47	A 83 N3799.3800	A150 N7609	A223 N7585	A293 N6285.6286
A 3 A2233-03	A 84 N5394.5395	A151 A1122.54	A224 N3921	A294 N3786.3788
A 4 A0145-12	A 85 N5194.5195	A152 N4486	A225 N2655	A295 A2339-03A.8
A 5 N3664	A 86 N7752.7753	A153 N5128	A226 N7252	A298 N7469.15283
A 6 N2537.2537A	A 87 N3808.3808A	A154 N1316	A227 N0474.0470	A299 N3690.10694
A 8 N0497	A 90 N5929.5930	A155 N3656	A229 N0507.0508	A300 A0923.68
A 9 N2523	A 91 N5953.5954	A157 N0520	A232 N2911	A301 A1107.24A.8
A 12 N2608	A 92 N7603	A158 N0523	A233 A1029.54	A303 10563.10564
A 13 N7448	A 94 N3226.3227	A159 N4747	A234 N3738	A304 N1241.1242
A 14 N7314	A 97 A1203.31A.8	A160 N4194	A235 N0014	A307 N2872.2874
A 15 N7393	A 99 N7547.7549	A162 N3414	A239 N5278.5279	A308 N0545.0547
A 16 N3627	A 99 N7550	A163 N4670	A240 N5257.5258	A309 N0942.0943
A 18 N4088	A102 A1718.49A.8	A166 N0750.0751	A242 N4676A.8	A310 11259
A 19 N0145	A103 A1645.48A-C	A167 N2672.2673	A243 N2623	A311 11259.1258
A 22 N4027	A104 N5216.5218	A168 N0221	A244 N4038.4039	A313 N3991.3994
A 23 N4618.4625	A105 N3561A-C	A169 N7236.7237	A245 N2992.2993	A313 N3995
A 24 N3445	A106 N4211A.8	A170 N7578A.8	A247 12338.2339	A314 A2255-04A-C
A 25 N2276	A112 N7805.7806	A172 11178.1181	A248 A1144-03A-C	A315 N2830.2831
A 26 N5457	A113 N0067 TO 72	A174 N3068A.8	A253 A0940-05	A315 N2832
A 27 N3631	A114 N2276.2300	A175 13481.3483	A253 A0941-05	A316 N3190.3187
A 28 N7678	A116 N4647.4649	A176 N4933A.8	A258 A0236.18A.8	A316 N3193
A 29 N6946	A117 10982.0983	A178 N5613.5614	A259 N1741A.8	A317 N3623.3627
A 31 10167	A118 N1143.1144	A182 N7674.7675	A260 A1211.16A.8	A317 N3628
A 32 A1712.59A.8	A120 N4438.4435	A184 N1961	A261 A1446-09	A318 N0833.0835
A 37 N1068	A122 N6040A.8	A185 N6217	A263 N3239	A318 N0838.0839
A 38 N6412	A123 N1888.1889	A186 N1614	A264 N3104	A319 N7317.7318
A 41 N1232.1232A	A124 N6361	A188 A1605.55	A266 N4861	A319 N7319.7320
A 42 N5829.14516	A125 A1636.42A.8	A189 N4651	A267 A1033.31	A319 N7320C
A 46 A2331.29	A126 A0155.02	A191 A1104.18A.8	A268 A0813.70	A320 N3745 TO 3754
A 49 N5665.5665A	A127 N0191.11563	A192 N3303A.8	A269 N4485.4490	A321 A0936-04A-E
A 53 N3290	A129 A0936.32A.8	A193 10883	A270 N3395.3396	A322 A1129.53A-D
A 58 A0829.19A.8	A133 N0541	A197 10701	A271 N5426.5427	A323 N7783
A 63 N2944	A134 N4472	A199 N5544.5545	A272 N6050.11179	A324 A1600.16A-C
A 65 N0091	A135 N1023	A202 N2719.2719A	A273 A0218.39A.8	A327 N1875
A 68 N7757	A136 N5820	A205 N3448	A277 N4809.4810	A329 A1129.71A-E
A 71 N6045	A137 N2914	A206 N3432	A279 N1253.1253A	A330 A1648.53A-F
A 73 11222	A140 N0274.0275	A209 N6052	A280 N3769	A331 N0375 TO 0388
A 75 N0702	A141 A0708.73A.8	A210 N1569	A281 N4631.4627	A332 N1229
A 76 N4569.13583	A142 N2936.2937	A212 N7625	A282 N0169.11559	A333 N1024
A 77 N1097	A143 N2444.2445	A213 10356	A283 N2798.2799	A335 N3509
A 78 N0772	A144 N7828.7829	A214 N3718	A284 N7714.7715	A336 N2685
A 79 N5490C	A145 A0220.41A.8	A215 N2782	A286 N5560.5566	A337 N3034
A 80 N2633	A146 A0004.06A.8	A216 N7679.7682	A286 N5569	
A 81 N6621.6622	A147 10298A.8	A217 N3310	A287 N2735.2735A	

F2. OBJECTS IN VORONTSOV-VELYAMINOV'S "ATLAS AND CATALOGUE OF INTERACTING GALAXIES".

V 1 N5194.5195	V 56 N4651	V119 N3104	V213 N6041A.8	V294 A1026.70A
V 3 10701	V 65 N3256	V122 A0155.02	V217 N0942.0943	V295 A2255-04A-C
V 5 N7752.7753	V 66 N4027	V123 A0708.73A.8	V219 N4567.4568	V297 N6872.14970
V 7 N5829	V 67 N7727	V127 A1242.34	V220 11182.1183	V300 N3808.3808A
V 8 N3981	V 68 N7393	V128 A1211.16A.8	V224 N4676A.8	V304 N6769.6770
V 9 N2535.2536	V 71 N3303A.8	V138 N2537.2537A	V226 N7805.7806	V307 N3187.3190
V 10 A1718.49A.8	V 73 N4618	V140 A1446-09	V228 N3786.3788	V308 N3627.3628
V 11 N3432	V 75 N3509	V143 A0236.18A.8	V229 A1107.24A.8	V310 N5403
V 13 A1203.31A.8	V 76 N4496A.8	V144 A1122.54	V230 N4004	V313 N4809.4810
V 14 N3445	V 77 N5613.5614	V150 A1129.53A-E	V231 N0520	V314 A2331.29
V 19 N5278.5279	V 78 N1487	V159 A1600.16A-C	V237 N3561A-C	V316 N2936.2937
V 20 N7609	V 79 N2623	V166 N0067 TO 72	V239 A1104.18A.8	V317 A1344.34A.8
V 21 N5426.5427	V 80 N0014	V169 N1875	V244 N5953.5954	V320 N3846A
V 22 N3656	V 81 N0274.0275	V172 A1129.71A-E	V245 N4038.4039	V323 A0218.39A.8
V 29 A1605.55	V 82 N2944	V175 N0741.0742	V246 N3395.3396	V324 A1448.35
V 30 N4485.4490	V 83 A0936.32A.8	V179 N4061.4065	V247 N6621.6622	V324 A1449.35
V 31 N3921	V 86 N6052	V181 N7578A.8	V249 N3994.3995	V326 A1328.31
V 32 A1101.41	V 89 A1712.59A.8	V188 N4435.4438	V251 N3664	V329 N7679.7682
V 33 N5216.5218	V 90 11165A.8	V189 N0750.0751	V252 N3447.3447A	V331 N1143.1144
V 34 A2339-03A.8	V 95 N3239	V193 N0382.0383	V254 N2359.23A.8	V334 N1241.1242
V 35 A1144-03A-C	V 96 A0232.37	V194 11178.1181	V261 N4194	V337 N1229
V 40 N2735.2735A	V101 11258.1259	V199 N4211A.8	V272 N7828.7829	V338 N0672.11727
V 43 13481.3483	V104 N4190	V201 N6782.4783	V273 A1148.56	V343 N7674.7675
V 48 N5394.5395	V106 A0923.68	V206 N4647.4649	V280 N7625	V344 N5457.5474
V 50 N2798.2799	V109 A1443.08A-C	V207 N0507.0508	V282 N3745 TO 3754	V350 N3799.3800
V 51 N7714.7715	V115 N6027A-D	V208 N7783	V285 N0985	
V 52 A0940-05	V116 A0936-04A-E	V209 N3226.3227	V288 N3717.7318	
V 52 A0941-05	V117 N2444.2445	V210 N5544.5545	V288 N7319.7320	
V 55 N5257.5258	V118 N3690.10694	V212 N6040A.8	V288 N7320C	

F3. OBJECTS IN MARKARIAN'S LISTS OF "GALAXIES WITH ULTRA-VIOLET CONTINUUM".

M 1 N0449	M108 I2458	M229 A1246+47	M353 N0354	M493 A1557+35
M 2 A0151+36	M109 A0919+47	M231 A1254+57	M355 A0119+26A	M494 A1558+30
M 3 A0609+71	M111 A0923+68	M232 A1255+59	M356 A0119+26B	M496 N6090
M 4 A0621+74	M114 A0926+56	M233 A1256+59	M359 A0124+18	M497 A1615+52
M 5 A0635+75	M115 A0927+49	M234 A1258+64	M360 A0141+16	M499 A1647+48A
M 6 I0450	M116 A0930+55A	M235 A1257+33	M361 A0142+16	M500 A1647+48B
M 7 A0722+72	M118 A0939+76	M237 A1259+48	M363 N0694	M501 A1652+39
M 8 I2184	M119 A0940+66	M241 A1303+33	M364 A0154+27	M503 N6275
M 9 A0732+58	M121 N2957A	M242 A1303+53	M365 A0201+28	M504 A1659+29
M 10 A0743+61	M122 N2963	M243 A1308+60	M366 A0208+13	M506 A1720+30
M 11 A0743+74	M123 A0943+56	M244 A1310+50	M368 I0235	M516 A2153+07
M 12 A0744+74	M125 A0947+46	M245 A1310+67	M369 A0234+20	M520 A2158+10
M 13 I2209	M128 A0953+60A	M247 A1312+55	M370 N1036	M522 A2257+16
M 14 A0805+72	M129 A0954+66	M249 I0875	M372 I1854	M523 N7455
M 15 A0828+75	M131 N3073	M250 A1315+44	M373 A0650+50	M524 A2258+09
M 16 A0847+73	M133 N3066	M251 A1317+52	M375 A0702+67	M526 A2310+10
M 17 A0847+57	M134 A0959+43	M253 A1318+56	M379 A0713+63	M527 N7518
M 18 A0858+60	M136 A1003+77	M254 A1320+51	M382 A0752+39	M529 N7532
M 19 A0912+59	M138 A1009+67	M255 A1320+53	M383 N2495	M530 N7603
M 20 A0917+71	M139 A1012+44	M256 N5144	M384 N2512	M531 N7648
M 21 A0944+58	M140 A1013+45	M257 N5164	M385 A0800+25	M532 A2324+11
M 22 A0946+55	M141 A1015+64	M258 A1326+53	M386 N2565	M533 N7674
M 23 A0953+60B	M143 A1023+62	M259 A1326+44	M389 N2599	M534 N7679
M 25 A1000+59	M144 A1023+44	M261 A1329+75A	M390 A0832+30	M535 A2329+25
M 26 A1008+59	M146 A1032+46	M262 A1329+75B	M391 N2691	M538 N7714
M 27 A1008+58	M147 A1032+63	M263 A1331+69	M394 N2824	M542 A2354+02
M 28 A1009+58	M148 A1032+44	M266 N5255	M398 A0921+17	M545 N0023
M 29 A1014+60	M149 A1034+66	M267 A1337+43	M399 A0923+35	M547 N0076B
M 30 N3188A	M150 A1035+44	M270 N5283	M400 A0923+19	M552 A0028+08
M 31 N3188	M151 A1039+48	M271 N5278+5279	M401 N2893	M555 N0245
M 32 A1023+56	M152 A1045+50	M273 A1342+56	M402 A0932+30	M557 A0046+02
M 33 A1029+54	M153 A1046+52	M275 A1346+31	M403 A0937+21	M558 N0279
M 35 N3253	M155 A1048+44	M279 A1351+69	M404 A0941+29	M559 I1639
M 36 A1102+29	M156 A1050+50	M280 A1355+29A+B	M405 N2970	M563 A0109+01
M 37 A1113+29B	M157 A1052+49	M281 N5383	M406 A0944+39	M564 A0111+07
M 40 A1122+54	M158 N3471	M282 A1401+69	M407 A0945+33	M565 I0089
M 41 I2943	M159 A1055+72	M284 A1404+69	M408 A0945+33	M566 A0116+04A
M 42 A1151+46	M161 A1059+45	M285 A1407+71	M409 N3011	M567 A0116+04B
M 43 A1200+39	M162 A1102+45	M286 N5607	M410 A0950+37	M569 A0120+01
M 44 I2987	M163 A1103+48	M288 A1450+74	M411 I2524	M571 N0622
M 45 A1201+60	M164 A1109+51	M290 A1534+58	M412 A0955+32	M572 A0141+11
M 46 A1213+41	M165 A1115+63	M291 A1552+19	M415 A1025+40	M573 A0141+02
M 47 A1213+40	M166 A1116+62	M292 A1553+19	M416 A1040+20	M575 A0145+12
M 48 A1214+58	M169 I0691	M294 A1559+18	M417 A1046+23	M576 A0146+05
M 49 A1216+04	M170 A1123+64	M296 A1601+19	M418 N3442	M582 A0155+02
M 50 A1220+02	M171 N3690	M297 N6052	M419 A1055+24	M585 A0200+02
M 51 A1221+04	M173 A1126+22	M298 I1182	M423 A1124+35	M587 A0208+05
M 52 N4385	M175 A1127+48	M300 I1189	M424 A1127+37	M588 N0851
M 53 A1253+27	M176 A1129+53C	M303 N7244	M426 A1138+35	M589 A0211+03
M 54 A1254+32	M177 A1130+55	M306 A2229+19	M427 A1140+36	M590 N0863
M 55 A1255+27A	M178 A1130+49	M307 N7316	M429 A1143+35	M592 A0217+00
M 56 A1256+27A	M179 N3725	M308 A2230+19	M430 N2921	M597 A0243+15
M 57 A1256+27C	M181 A1134+20A	M311 I1461	M432 N4004	M599 A0245+02
M 59 N4861	M182 A1134+20B	M312 A2258+16	M435 A1209+40	M600 A0248+04
M 60 A1257+28	M185 N3811	M313 N7456	M438 A1220+22	M601 A0254+02
M 62 A1302+30	M186 N3870	M314 N7468	M439 N4369	M602 I0277
M 66 A1323+57	M187 A1143+71	M315 A2301+22	M441 I3723	M603 N1222
M 67 A1339+30	M188 N3888	M316 N7525	M442 N4687	M605 A0313+03
M 68 A1342+27	M190 N3928	M317 A2311+23	M444 A1246+34	M606 A0317+03
M 71 N2366*	M191 A1150+70	M318 N7580	M446 N4719	M607 N1320
M 73 A0727+63	M192 A1152+51	M319 A2316+24	M447 A1255+24	M609 A0322+06
M 75 A0728+55	M193 A1152+57	M321 N7620	M449 N5014	M610 A0323+06
M 78 A0737+65	M195 A1200+64	M322 A2317+25	M450 A1312+35	M611 A0323+00
M 79 A0738+49	M197 A1205+67	M323 N7624	M451 A1322+36	M612 A0328+03
M 82 A0742+62	M198 A1206+47	M324 A2324+17	M452 N5142	M615 A0422+00
M 84 A0751+55	M199 A1208+70	M325 N7673	M456 A1324+26	M616 N1588
M 85 N2534	M200 A1208+48	M326 N7677	M455 A1328+31	M617 N1614
M 86 N2537	M201 N4194	M328 A2335+29	M459 A1332+34C	M618 A0434+10
M 87 N2544	M202 A1215+58	M330 A2340+19	M461 A1345+34	M620 N2273
M 88 A0824+55	M203 A1215+44	M331 A2348+20	M462 A1349+40	M622 A0804+39
M 89 A0825+52	M206 A1222+67	M332 N7798	M465 A1359+37	M624 A0821+25
M 90 A0826+52	M207 N4384	M333 N7805	M467 A1410+34	M625 N2625
M 91 A0828+52	M209 A1223+48	M334 A0001+21	M470 N5596	M626 A0842+37
M 92 A0832+46	M210 A1224+48	M335 A0003+19	M471 A1420+33	M627 A0843+36
M 93 A0832+66	M212 A1225+44	M336 N7836	M472 A1426+36	M628 A0847+29
M 94 A0834+51B	M213 N4500	M338 A0021+14	M474 N5683	M629 A1014+15
M 95 A0844+70	M214 A1229+66C	M339 A0022+14	M475 A1437+37	M630 A1020+18
M 96 A0845+46	M215 A1230+46	M340 A0025+30B	M477 A1439+53	M631 A1027+16
M 97 A0846+65	M216 A1230+52	M341 I1559	M479 I1076	M636 A1133+16
M 98 A0846+72	M219 A1236+56	M343 A0035+14	M480 N5860	M649 I3582
M 99 A0847+61	M220 A1241+55A	M345 A0037+24	M482 A1526+55	M650 I3600
M100 A0854+66	M221 A1241+55B	M346 A0042+27	M485 A1530+51	M656 N4673
M101 A0901+51	M222 A1243+47	M347 I1586	M486 A1535+54	M685 A1428+27
M102 A0908+46	M223 A1243+71	M348 N0262	M487 A1535+55	M699 A1622+41
M103 A0911+67	M224 A1244+48	M349 A0050+21	M489 N5992	
M104 A0913+53	M225 A1245+47	M350 A0054+23	M490 A1544+46	
M105 A0915+71	M226 A1245+72	M352 A0057+31	M492 A1556+26	

APPENDIX H

Sources of HI Flux and Velocity Data

APPENDIX H. SOURCES OF HI FLUX DATA.

N0024	2	N2613	2	N4288	6	N6239	2	A0510-33	6	A1225+43	6
N0045	2 456	N2655	4	N4293	4	N6340	2	A0516-21	6	A1226+37	6
N0055	0 5	N2683	1	N4294	1 4	N6384	2	A0526-69	0 5	A1226+43	6
N0157	2	N2685	12	N4299	4	N6503	1	A0527+73	6	A1226+02	6
N0214	2	N2691	2	N4303	45	N6643	1	A0549+75	6	A1229+29	6
N0216	2	N2701	2	N4321	2 45	N6822	0	A0553+03	23	A1230+31	6
N0224	01 4	N2763	1	N4374	4	N6835	2	A0558-28	6	A1232+06	6
N0244	2	N2776	2 4	N4449	0	N6946	1 34	A0613-26	6	A1241+05	6
N0247	0 4	N2782	2	N4487	1	N6951	2	A0635+75	2	A1241+00	6
N0253	12	N2799+8	1	N4490	2 4	N7013	2	A0700+56	6	A1242+34	6
N0275	1	N2835	2	N4501	4	N7177	2	A0705+71	2	A1243+05	6
N0278	2	N2841	1	N4504	1	N7218	12	A0722+72	2	A1244+36	6
N0300	0 5	N2893	2	N4517	1	N7314	2	A0724+40	6	A1246+34	2
N0428	12	N2903	12	N4523	6	N7319	12	A0738+40	6	A1247+10	6
N0450	1	N2997	2	N4526	4	N7320	12	A0739+16	6	A1250+06	6
N0514	2	N3027	2	N4527	5	N7331	12	A0744+74	2	A1251+11	6
N0520	1 4	N3031	0 23	N4535	45	N7361	2	A0754+58	2 6	A1255+02	6
N0578	2	N3034	0	N4536	5	N7418	2	A0807+46	6	A1256+14	6
N0598	012 4	N3041	2	N4548	4	N7448	2 4	A0813+70	0 2 4 6	A1300+17	6
N0613	2	N3057	6	N4559	12	N7468	2	A0819+74	6	A1302+07	6
N0628	12 4	N3077	4	N4567+8	4	N7479	2	A0825+42	6	A1303+17	6
N0672	1	N3104	2	N4569	4	N7625	12	A0826+52	2	A1304+67	6
N0753	2	N3109	0 2 456	N4579	4	N7640	12 4	A0901+51	2	A1310+36	6
N0772	1 4	N3115	2 4	N4631	12	N7673	2	A0905+06	6	A1311+46	6
N0864	2	N3169	2	N4651	1 4	N7677	2	A0907+22	6	A1312+46	2 6
N0871	2	N3184	1 4	N4654	1 4	N7678	2	A0908+14	6	A1313+47	6
N0895	1	N3190	12	N4656	12	N7714+5	1	A0909+35	6	A1313+25	6
N0908	2	N3206	1	N4688	1	N7741	1	A0917+12	6	A1316+08	6
N0925	12 4	N3227	2 4	N4698	4	N7793	2	A0918+12	6	A1316+42	6
N0958	2	N3294	2	N4699	5	I0010	01234	A0919+22	6	A1318+10	6
N0972	4	N3310	12	N4707	6	I0239	1	A0936+71	4 6	A1321+24	6
N1003	1	N3319	12	N4731	1	I0342	0 3	A0942+31	6	A1323+58	6
N1023	12	N3320	1	N4747	1	I0356	1 4	A0947+31	6	A1323+21	6
N1036	2	N3338	2	N4789A	2 6	I1558	6	A0949+01	6	A1327+45	2 6
N1042	1	N3344	12 4	N4808	1	I1574	6	A0953+29	6	A1333+29	2
N1055	2	N3359	1	N4826	2 4	I1613	0	A0956+30	6	A1333+46	6
N1058	4	N3367	2	N4861	2	I1830	2	A0957+05	6	A1334+07	6
N1068	2 4	N3368	2 4	N4941	2	I1876	2	A1006+30	6	A1334+46	6
N1084	2	N3377A	6	N4948A	1 6	I2184	2	A1008+25	6	A1335+09	6
N1140	1	N3395+6	1	N4951	1	I2339+8	1	A1008+04	0 2 6	A1337+40	6
N1156	1	N3423	1	N4961	1	I2574	0 4 6	A1020+71	6	A1340+39	6
N1187	2	N3432	1	N5005	1 4	I3522	6	A1021+15	2 6	A1348+38	2 6
N1253	1	N3448	1 4	N5033	1	I3576	12 6	A1026+70A	6	A1352+54	6
N1291	5	N3486	2	N5102	2	I3687	2 6	A1029+54	2	A1353+18	6
N1300	2	N3510	2	N5112	1	A0001+14	6	A1033+24	6	A1413+16	6
N1326	2	N3516	2	N5194	0 234	A0016+19	2	A1033+31	6	A1413+23	6
N1337	1	N3521	2	N5204	12	A0017+10	6	A1039+23	6	A1420+45	6
N1345	2	N3556	12	N5236	0 2345	A0031+31	6	A1039+34	6	A1422+44	6
N1376	1	N3596	2	N5247	2	A0043+11	6	A1041+60	6	A1427+44	6
N1385	2	N3621	2	N5248	2 4	A0047+21	2 6	A1046+26	2	A1428+27	2 6
N1518	2	N3627	2	N5253	2 4	A0051+73	0 5	A1046+65	6	A1433+57	6
N1532	2	N3628	12	N5264	4 6	A0058+07	6	A1047+19	6	A1433+59	6
N1560	4	N3629	1	N5371	4	A0107+49	6	A1059+45	2	A1436+08	6
N1569	1	N3631	1	N5427+6	1	A0118+12	6	A1103+20	6	A1442+08	6
N1637	1	N3664	6	N5457	0 234	A0132+04	6	A1110+53	6	A1446+09	1 6
N1741	1	N3718	12 4	N5468	1	A0137+15	6	A1117+02	6	A1448+35	2
N1744	2	N3726	1	N5474	12	A0145+12	1 6	A1130+49	2	A1449+35	2
N1784	2	N3917	1	N5496	2	A0200+21	6	A1140+59	6	A1459+52	6
N1808	2	N3934	1	N5523	1	A0208+06	6	A1143+50	2	A1535+44	6
N1832	2	N3992	1	N5556	6	A0221+35	2 6	A1146+28	6	A1539+00	6
N1879	6	N4038	1	N5584	1	A0223+21	6	A1148+56	6	A1547+81	6
N1961	2	N4051	2 4	N5585	12	A0229+38	6	A1148+39	6	A1548+16	6
N1964	2	N4096	2	N5668	1 4	A0230+33	6	A1149+52	6	A1600+19	2 6
N2090	2	N4116	5	N5669	1	A0230+40	6	A1155+22	6	A1614+47	6
N2139	2	N4144	1	N5676	2	A0231+29	2 6	A1155+38	6	A1653+53	6
N2146	2	N4151	2 4	N5713	1	A0237+01	6	A1155+51	6	A1717+14	6
N2276	1	N4157	2	N5774	2	A0238+59	234	A1201+01	6	A2044+13	6
N2280	2	N4178	4	N5861	2	A0245+03	6	A1202+27	6	A2207+19	6
N2339	2	N4183	1	N5879	2	A0246+01	6	A1204+40	6	A2214+21	6
N2344	2	N4189	1	N5899	4	A0249+01	6	A1208+50	6	A2228+33	1
N2366	2 4 6	N4192	4	N5907	2	A0312+04	6	A1208+02	6	A2231+32	2 6
N2403	123	N4194	12	N5921	2	A0325+17	2	A1212+13	6	A2233+03	6
N2415	2	N4214	0	N5970	2	A0441+74	6	A1212+36A	6	A2236+05	6
N2500	2	N4216	4	N6015	12	A0446+00	6	A1213+11	6	A2326+14	6
N2525	2	N4217	2	N6070	12	A0447+29	6	A1214+29	6	A2327+40	6
N2532	2	N4236	3	N6118	1	A0450+25	6	A1218+46	6	A2332+17	6
N2535+6	12	N4244	2	N6181	2	A0500+16	6	A1222+70	6	A2334+00	6
N2541	12	N4254	4	N6207	2	A0505+16	6	A1223+58	6	A2346+25	6
N2552	2	N4274	4	N6217	12 4	A0508+31	6	A1224+37	6	A2359+15	6

APPENDIX I

Finding List of IC Objects

APPENDIX I. FINDING LIST OF "INDEX CATALOGUE" OBJECTS.

IC	RA (1950) D	IC	RA (1950) D	IC	RA (1950) D	IC	RA (1950) D
10010	0 17.69 59 0.9	11173	16 2.96 17 33.5	12537	10 1.59 -27 19.5	14051	12 58.48 28 16.5
10043	0 39.7 29 22	11178	16 3.29 17 44.0	12554	10 7.5 -66 48	14182	13 3.51 37 52.5
10049	0 41.4 1 35	11181	16 3.31 17 43.5	12565	10 18.5 28 11	14189	13 3.7 36 14
10056	0 49.0 -13 7	11182	16 3.36 17 56.1	12565A	10 18.5 28 11	14209	13 7.7 -6 54.3
10056A	0 49.4 -13 1	11183	16 3.38 17 54.0	12574	12 25.36 88 40.1	14219	13 15.6 -31 22
10065	0 58.0 47 25.6	11185	16 3.49 17 51.0	12580	10 26.0 -31 15	14237	13 21.83 -20 52.6
10079	1 6.36 -16 12.9	11186	16 3.48 17 29.8	12584	10 27.6 -34 39	14263	13 26.44 47 11.1
10080A	1 6.38 -15 40.5	11189	16 4.00 18 18.9	12587	10 28.7 -34 18	14278	13 28.34 47 30.4
10080B	1 6.38 -15 40.4	11194	16 4.41 17 53.7	12604	10 46.64 33 2.4	14296	13 33.78 -33 42.7
10089	1 13.5 4 2	11195	16 4.42 17 19.5	12627	11 7.44 -23 27.3	14299	13 33.93 -33 48.7
10115	1 24.20 18 57.4	12222	16 33.6 46 19	12738	11 18.6 34 38	14327	13 45.89 -29 58.3
10119	1 25.37 -2 18.1	12236	16 56.3 20 7	12943	12 33.98 55 7.4	14329A	13 46.24 -30 3.0
10129	1 25.66 -2 10.6	12237	16 55.23 55 6.2	12974	11 51.3 -4 52	14351	13 55.04 -29 4.3
10127	1 27.28 -7 14.3	12248	17 11.11 60 3.3	12987	12 0.85 39 5.5	14366	14 2.2 -33 32
10167	1 48.37 21 40.0	12254	17 12.4 72 27	12995	12 3.21 -27 39.7	14444	14 28.5 -43 12
10173	1 53.4 1 2	12258	17 26.5 58 33	13044	12 10.26 14 15.3	14448	14 34.2 -78 36
10198	2 3.4 9 3	12259	17 26.6 58 35	13059	12 12.38 13 44.2	14562	15 34.3 43 39
10211	2 8.5 3 38	12267	17 38.0 59 25	13061	12 12.52 14 18.5	14564	15 34.4 43 40
10223	2 19.7 -20 58	12269	17 50.0 21 35	13074	12 13.2 18 58	14566	15 35.0 43 43
10235	2 30.02 20 25.5	12297	18 32.6 49 14	13112	12 15.3 28 18	14653	17 22.3 -60 52
10239	2 33.34 38 45.1	13301	19 25.3 49 39	13115	12 15.45 6 55.9	14660	17 23.4 75 54
10267	2 51.1 12 38	13302	19 29.08 35 40.9	13136	12 16.42 6 27.8	14662	17 42.20 -64 37.3
10277	2 57.2 2 34	13303	19 29.69 35 46.4	13155	12 17.21 6 17.0	14662A	17 46.67 -64 56.8
10284	3 2.9 42 11	13317	20 20.71 0 30.2	13244	12 20.7 14 40	14710	18 23.5 -67 1
10292	3 7.0 40 35	13347	20 59.0 -13 31	13253	12 21.1 -34 21	14713	18 24.7 -67 16
10298A	3 8.7 1 8	14401	21 44.4 1 28	13256	12 21.11 20 0	14718	18 25.3 -66 42
10298B	3 8.7 1 8	14411	21 57.66 -13 23.3	13259	12 21.27 7 28.0	14717	18 28.9 -58 0
10302	3 10.2 4 31	14441	22 13.14 37 3.1	13260	12 21.35 7 23.2	14719	18 29.0 -56 46
10309	3 12.82 40 37.2	14459	22 54.38 -36 43.8	13267	12 21.55 7 19.2	14720	18 29.2 -58 26
10310	3 13.41 41 8.6	14460	22 54.53 4 24.6	13268	12 21.6 6 53	14721	18 30.1 -58 32
10312	3 14.83 41 34.3	14461	22 56.09 14 54.1	13290	12 22.52 -39 29.7	14796	18 52.43 -54 16.8
10313	3 17.65 41 42.8	15008	23 43.4 11 47	13303	12 22.71 12 59.5	14797	18 52.47 -54 22.3
10342	3 41.96 67 56.4	15151	23 53.6 -1 16	13322	12 23.36 17 49.9	14798	18 52.6 -62 10
10343	3 37.86 -18 36.2	15166	23 53.7 -1 12	13322A	12 23.16 7 29.5	14806	18 57.2 -57 36
10346	3 35.69 -18 25.9	15252	23 56.7 46 37	13330	12 23.44 31 7.2	14810	18 58.8 -56 14
10356	4 2.57 60 40.7	15530	0 4.74 32 20.0	13355	12 24.30 13 27.2	14820	19 4.5 -63 32
10381	4 37.87 75 32.8	15554	0 30.66 -32 32.1	13370	12 24.98 -39 3.7	14827	19 8.90 -60 57.2
10387	4 39.3 -7 11	15558	0 33.30 -25 39.1	13381	12 25.72 12 4.0	14829	19 8.6 -56 38
10391	4 49.72 78 6.7	15559	0 34.23 23 42.6	13392	12 26.19 15 45.5	14831	19 10.23 -62 22.8
10398	4 55.80 -7 51.3	15647	0 36.67 -9 17.4	13393	12 26.19 15 45.5	14832	19 9.8 -56 45
10439	4 59.28 22.2	15659	0 36.8 6 27	13413	12 26.84 11 42.6	14836	19 11.7 -60 17
10449	6 39.88 71 2.7	15754	0 40.58 -22 31.5	13414	12 26.9 7 3	14837	19 11.20 -54 45.1
10450	6 45.72 74 29.1	15866	0 45.28 22 6.1	13418	12 27.18 11 40.8	14837A	19 11.2 -54 13
10451	6 46.38 74 32.5	16131	1 2.22 1 51.0	13442	12 28.81 14 23.5	14839	19 11.55 -54 43.0
10467	7 21.92 79 58.5	16137	1 8.6 -30 41	13453	12 29.0 15 8	14840	19 11.7 -56 19
10469	7 41.62 85 17.3	16139	1 9.2 -0 55	13457	12 29.33 12 56.0	14842	19 15.02 -60 44.4
10492	8 2.62 26 18.7	16553	1 12.3 33 7	13614	12 30.06 13 56.3	14845	19 16.02 -60 28.6
10509	8 29.0 24 10	16559	1 22.33 52.7	13675	12 30.16 13 2.9	14852	19 22.0 -60 28
10511	8 35.36 33 39.8	17703	1 23.86 -1 53.9	13676	12 30.18 14 19.5	14889	19 41.32 -54 27.6
10520	8 48.35 73 40.8	17706	1 24.5 14 31	13678	12 30.22 14 28.3	14892	19 44.1 -70 22
10529	9 13.45 73 58.2						
10562	9 43.54 -3 44.4	17723	1 40.6 8 38	13681	12 30.35 11 41.0	14943	20 2.9 -48 32
10563	9 43.74 4 46.8	17727	1 47.38 27 5.1	13681A	12 30.42 11 40.1	14960	20 10.08 -70 41.6
10564	9 43.76 3 18.1	17731	1 47.38 26 56.9	13683	12 30.64 11 37.5	14967	20 11.11 -70 43.0
10602	10 15.7 7 18	17738	1 48.66 -10 2.3	13699	12 31.2 11 16	14970	20 11.70 -70 54.4
10610	10 23.75 20 29.0	17743	1 50.2 12 28	13722	12 32.25 15 29.8	14972	20 12.5 -71 4
10624	10 33.8 -8 5	17746	1 51.7 4 33	13728	12 32.42 15 50.5	14981	20 14.5 -71 0
10651	10 48.5 -1 52	17783	2 7.8 -33 13	13743	12 33.21 26 33.6	15000	20 19.90 6 16.2
10691	11 23.88 59 25.8	17784	2 13.27 32 25.2	13766	12 34.08 6 53.8	15020	20 27.8 -33 42
10694	11 25.72 58 56.4	17788	2 13.65 -31 25.9	13782	12 34.03 26 28.5	15039	20 40.19 -30 2.1
10701	11 28.2 20 45	1830	2 36.87 -27 39.5	13783	12 34.21 13 32.0	15052	20 47.37 -69 23.5
10712	11 32.1 49 21	1854	2 46.51 19 5.9	13785	12 34.19 27 6.2	15063	20 48.2 -57 16
10749	11 55.99 43 0.8	1856	2 46.30 -0 58.5	13798	12 34.89 28 28.9	15078	20 59.7 -17 0
10750	11 56.29 43 0.1	1876	3 2.4 -27 38	13799	12 35.22 26 58.9	15092	21 12.1 -64 41
10751	11 56.30 42 51.0	1913	3 17.55 -32 38.8	13800	12 35.1 27 24	15101	21 17.9 -66 4
10755	11 58.6 14 23	1933	3 24.3 -52 57	13817	12 36.88 8 14.2	15105	21 21.2 -60 50
10758	12 1.67 62 47.0	1953	3 31.49 -21 38.7	13818	12 36.7 26 57	15105A	21 22.6 -60 29
10764	12 7.65 -29 27.5	1954	3 30.2 -52 15	13820	12 36.8 28 11	15105B	21 22.9 -61 3
10773	12 15.58 6 25.1	1970	3 34.8 -44 7	13823	12 36.9 27 23	15131	21 44.4 -35 7
10775	12 16.35 13 11.5	12006	3 52.2 -36 8	13645	12 38.0 26 48	15135	21 45.3 -35 11
10783	12 19.11 16 1.4	12033	4 6.1 -53 48	13646	12 38.0 26 47	15152	21 59.6 -51 32
10783A	12 19.80 16 0.6	12035	4 7.6 -45 38	13651	12 38.3 27 0	15156	22 0.4 -34 2
10794	12 25.61 12 22.2	12038	4 7.80 -56 7.5	13687	12 39.83 38 46.5	15168	22 5.92 -28 6.1
10800	12 31.43 15 37.8	12056	4 15.65 -60 20.0	13718	12 42.3 12 37	15179	22 13.2 -37 5
10818	12 44.2 30 0	12058	4 16.83 -56 3.3	13720	12 42.28 12 20.2	15181	22 10.30 -46 16.4
10821	12 45.0 30 4	12075	4 28.5 -5 54	13723	12 42.12 41 0.6	15186	22 15.8 -37 3
10832	12 51.4 26 43	12082	4 27.97 -53 56.1	13730	12 42.6 21 27	15201	22 18.3 -46 19
10835	12 54.5 26 45	12085	4 30.28 -54 31.4	13742	12 43.0 13 36	15240	22 39.0 -45 4
10844	13 0.57 -30 15.2	12104	4 54.2 -15 52	13804	12 46.37 35 36.4	15243	22 39.0 23 7
10850	13 5.2 -0 35	12163	6 14.34 -21 21.5	13806	12 46.42 15 10.8	15264	22 54.1 -36 49
10853	13 5.5 53 2	12174	7 2.44 75 25.9	13896	12 53.7 -50 3	15267	22 54.37 -43 39.9
10875	13 15.14 57 48.0	12179	7 10.72 65 0.9	13896A	12 52.6 -49 49	15267A	22 53.07 -43 42.3
10883	13 18.28 34 23.9	12184	7 23.64 72 13.8	13900	12 53.28 27 31.3	15267B	22 54.09 -44 1.7
10900	13 32.2 9 36	12200	7 27.7 -62 14	13946	12 56.41 28 4.7	15269	22 54.95 -36 17.7
10954	13 48.9 71 25	12200A	7 27.4 -62 10	13947	12 56.45 28 3.2	15269A	22 53.1 -36 39
10982	14 7.61 17 55.9	12209	7 51.96 60 26.3	13949	12 56.53 28 6.0	15269B	22 53.9 -36 31
10983	14 7.70 17 58.2	12226	8 3.4 12 41	13955	12 56.69 28 15.9	15269C	22 57.6 -35 38
11029	14 30.72 50 7.6	12233	8 10.46 45 53.6	13959	12 56.72 28 3.2	15270	22 55.2 36 7
11044	14 40.4 5 6	12338	8 20.7 21 30	13960	12 56.71 28 7.4	15271	22 55.3 -34 1
11055	14 44.7 -13 31	12339	8 20.7 21 30	13963	12 56.81 28 2.7	15273	22 56.67 -37 58.4
11065	14 48.26 63 28.5	12341	8 20.8 21 36	13973	12 57.10 28 9.2	15283	23 0.78 8 37.4
11067	14 50.57 3 32.2	12363	8 22.88 19 36.8	13976	12 57.07 28 7.1	15284	23 4.30 18 51.1
11076	14 52.68 18 14.3	12378	8 25.4 30 36	13990	12 57.2 29 10	15285	23 4.4 22 40
11090	15 1.9 42 53	12389	8 42.55 73 43.4	13998	12 57.37 28 14.6	15325	23 26.0 -41 36
11091	15 5.52 -10 57.1	12421	8 51.28 32 52.2	14011	12 57.70 28 16.3	15328	23 30.5 -45 19
11099	15 5.58 56 42.0	12458	8 17.65 64 27.1	14012	12 57.72 28 20.8	15328A	23 30.4 -45 19
11131	15 36.49 12 14.6	12469	9 20.8 -32 13	14021	12 57.83 28 18.5	15328B	23 31.2 -45 31
11143	15 35.0 82 38	12476	9 24.92 30 12.3	14026	12 57.96 28 18.9	15332	23 31.80 -36 22.6
11155	15 58.3 15 50	12487	9 27.34 20 18.7	14040	12 58.22 28 19.6	15337	23 33.9 20 52
11158	15 59.0 1 51	12522	9 52.97 -32 54.0	14041	12 58.27 28 15.9	15338	23 34.0 20 52
11165A	15 59.8 15 50	12523	9 52.98 -32 58.4	14042	12 58.30 28 14.3	15342	23 36.14 26 44.1
11165B	15 59.8 15 50	12524	9 54.60 33 51.4	14045	12 58.40 28		

APPENDIX M

Sources of Magnitudes and Color Data

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.

NGC	V, B-V	U-B	NGC	V, B-V	U-B
N0016	2C,2N	2N	N0600	1N	1N
N0023	3C	5N	N0612	2S	2S
N0024	5N	4N	N0613	1A,1C,1N,1SW	1A,1N,1SW
N0045	4N	1A	N0615	2N	2N
N0055	1A	1R,1SA	N0628	1A,4C,3F,1G	
N0068	1C,1R,1SA,4Y		N0636	1C,2N	2N
N0069	1C		N0660	1G,1N	1N
N0070	1Y		N0662	2AH	2AH
N0071	2C,2Y		N0670	3N	3N
N0072	2C		N0672	1C,1G,4N	4N
N0072A	1C		N0679	5AH	4AH
N0080	1C,4R,4Y	4R	N0681	2C,3CW,4N	4N
N0083	1C,1R,2Y	1R	N0701	2N	2N
N0095	1A,4N	4N	N0708	1PE	
N0105	1C		N0718	2A,2C	
N0125	2C,2L,2Y	2L	N0720	1A,1C,2N,1R	2N,1R
N0127	2L	2L,2N,5R	N0721	1C	
N0128	1A,2C,2L,2N,5R,3Y	1L	N0736	2AH,2C,2R	2AH,2R
N0130	2L	2N	N0741	1A,1AH,2C,1PE,2R,1S,2Y	2R,1S
N0134	2N	5N	N0750	1C,2L	2L
N0145	6N		N0750.	2C,2H	
N0147	2B,2C,1G	4N	N0751	1C,2L	2L
N0148	5N	2N	N0753	1C,1G,2H	
N0150	2N	2N	N0770	1C	
N0151	2C,4N	4N	N0772	1C,1F,1G	
N0157	4C,3CW,1G,4N	3CW,4N	N0779	3C,2N	2N
N0160	2C		N0784	1G	
N0163	3N	3N	N0788	1C,2N	2N
N0165	2N	2N	N0803	1G	
N0169	1WE	1WE	N0821	1A,5C	
N0175	2N	2N	N0833	1N	1N
N0178	1C,1N	1N	N0833.	1N	1N
N0182	1C		N0835	1N	1N
N0185	2B,1C,1G,3H,1L,1N,2R,1Y	1L,1N,2R,1Y	N0838	3N	3N
N0193	1N,2R,1S,3Y	1N,2R,1S	N0839	2N	2N
N0194	2C,2R,4Y	2R	N0848	1N	1N
N0198	2Y	1R	N0864	3C	
N0199	1R	2R	N0871	1C	
N0204	2R	2D,1E,1HC,3L,1N,1R	N0877	1A,1C,1N	1N
N0205	2B,3C,2D,1E,3F,1G,2HC,3L,1N,1R	2N	N0890	1C,2H,1L	1L
N0210	3C,2N	2N	N0891	1C,1G,3N	3N
N0214	2C,2N	2N	N0895	2N	2N
N0216	1DU,1HI	1DU,1HI	N0908	2C,1G,1N	1N
N0221	4A,2B,2C,2D,2E,1G,3HC,1K,1L,4N,1NF,7PN,1R,1Y	2D,1E,3HC,1L,4N,1NF,7PN,1R,1Y	N0910	1PE	2N
N0224	1A,3B,5D,3E,1G,1J,3K,1KN,3N,1NF,1R,3Y	5D,3E,1J,3K,1KN,3N,1NF,1R,3Y	N0922	1C,2N	1N
N0227	1C		N0925	4A,1G,1N	4N
N0237	1A		N0936	4A,1C,1G,4N	3N
N0244	1DU,1HI	1DU,1HI	N0941	1G,3N	2N
N0247	1C,1G,1N	1N	N0949	2H,2N	2N
N0253	1A,3CW,2K,2N	1A,3CW,2N	N0955	2N	2N
N0254	3N	3N	N0958	2N	2N
N0255	2C,1N	1N	N0972	1C,5N	5N
N0262	1AR,1WE	1AR,1WE	N0976	4N	4N
N0274	1N	1N	N0985	4N	4N
N0275	1N	1N	N0986	1N	1N
N0278	2C,2H,2N	2N	N1003	1C,1G	4N
N0300	1A	1A	N1022	4N	2N
N0309	3N	3N	N1023	4A,1C,3F,1G,2N	1S
N0326.	3N	2N	N1042	1C,1G	1N
N0337	5N	5N	N1044	1N,1S	1N
N0357	2C,4N	4N	N1046	1N	2C
N0375	1C		N1048.	2C	3N
N0379	3C,2L,3N,2R	2L,3N,2R	N1052	1C,1G,3N	4N
N0380	3C,2L,3N,2R	2L,3N,2R	N1055	1G,4N	
N0382	2L,1N,1Y	2L,1N	N1058	1C,1G,2H	8N,19Q,6S,4SW,6WA,3X,8Y,1Z
N0383	1C,1L,1N,1PE,1R,2Y	1L,1N,1R	N1068	4A,3C,3F,1G,8N,19Q,6S,4SW,6WA,3X,8Y,1Z	2N
N0384	1C,2L,3N	2L,3N	N1073	1C,1G,2N	1N,1Y
N0385	2C,2L,3N	2L,3N	N1079	1C,1N,2Y	1N
N0386	1C,2L	2L	N1084	4A,3C	1N
N0388	3C,2L	2L	N1087	3C,1G,1N	2N
N0404	1C,2H,1G,2N	2N	N1090	1G,2N	1A,2N,2SW
N0428	1A,2C,1G,2N	2N	N1097	1A,2C,2N,1SW	1N
N0447	1N	1N	N1097A	1C,1N	2N
N0449	3N,2WE	3N,2WE	N1140	1C,1L,2N	2N
N0450	3N	3N	N1143	2N	1N
N0467	4N	4N	N1144	1N	2N
N0470	1A,3L,4N	3L,4N	N1156	2C,1G,1L,2N	2N
N0474	1A,2C,1L,4N	1L,4N	N1167	1N	1N
N0488	1A,3C,1G,2H,2N	2N	N1169	2N	2N
N0493	3N	3N	N1172	2N	1N
N0495	1R	1R	N1175	2H,1N	1N
N0496	1Y		N1187	1N	1N
N0499	1L,2R,3Y	1L,2R	N1199	1L,1N,3Y	1N,1Y
N0507	1L,1PE,2R,6Y	1L,2R	N1201	1C,1L,1N,4Y	1L,1N,1Y
N0508	2R,2Y	2R	N1209	3C,1L,1N,4Y	1L,1N,1Y
N0514	1C,2P		N1218	1S,8Y	1S
N0520	1A,3C,1G,1L,3N	1L,3N	N1232	2C,1G,1N	1N
N0521	1A		N1233	1N	1N
N0524	4A,3C,4L,1R	4L,1R	N1255	3N	3N
N0533	1A,1N	1N	N1265	1Y	1N
N0541	1S,3Y	1S	N1267	1H,1N	1N,1R
N0543	2Y		N1270	1C,1N,1R,3WE	1R
N0545	1N,1R,3Y	1N,1R	N1272	1C,3H,1R,3WE	2R
N0545.	1N,1PE,1S,2Y	1N,1S	N1273	1C,2H,2R	4LY,19Q,3R,1WE,3X,6Y,1Z
N0547	1N,3Y	1N	N1275	1A,1C,4LY,1PE,19Q,3R,1WE,3X,7Y,1Z	
N0560	2C,1L,1R	1L,1R	N1277	1A,1C,3WE	2R
N0564	1C,1R,2Y	1R	N1278	1A,1C,2R	
N0578	3C,1G,2N	2N	N1281	1A	
N0584	4A,1C,3N,1R	3N,1R	N1282	1C	
N0586	1N	1N	N1283	3N	3N
N0596	1C,6N,1R	6N,1R	N1291	1A,4N	1A,4N
N0598	1A,1E,1G,3K,4PN,1Y	1E,4PN,1Y	N1293	1C	

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.					
NGC	V, B-V	U-B	NGC	V, B-V	U-B
N1294	1C		N2146	1B,1C,3F,1G,1N	1N
N1300	2C,1G,7N	7N	N2179	4N	4N
N1302	1C		N2188	4N	4N
N1309	3N	3N	N2196	5N	5N
N1313	1AL	1AL	N2207	2C,1N	1N
N1316	1AL,1C,9S,4Y	1AL,9S,2Y	N2207.	2N	2N
N1317	2C,3Y	2Y	N2217	1C,2N	2N
N1325	1G		N2223	5N	5N
N1325A	1G		N2268	2C,1G,1N	1N
N1326	1N,3Y	1N,1Y	N2272	2N	2N
N1331	1C		N2276	1C,1G	2N
N1332	2C,1L	1L	N2280	2N	2N
N1337	1G,3N	3N	N2300	1B,1C,1G,1N	1N
N1343	2AH	2AH	N2314	1B,1C,2N	2N
N1344	2N	2N	N2325	3N	3N
N1345	1DU,1HI	1DU,1HI	N2329	1PE	
N1350	3N	3N	N2336	2C,1G	
N1353	2N	2N	N2339	3C,3N	3N
N1355	3N	3N	N2344	2N	2N
N1357	4N	4N	N2347	2C,3N	3N
N1358	3N	3N	N2366	2C,1G	
N1359	1C		N2379	1B,2C,1N	1N
N1365	1AL,1E,2N,1SW	1AL,1E,2N,1SW	N2389	2C,4N	4N
N1371	1N	1N	N2403	2C,2F,1G	
N1374	1N	1N	N2415	1DU,1HI,3N	1DU,1HI,3N
N1374A	1N	1N	N2424	4N	
N1375	1N	1N	N2427	1N	1N
N1379	1N	1N	N2434	3Y	1Y
N1380	1C,1L	1L	N2441	1C	
N1385	1C,2N	2N	N2442	1AL,2M	2M
N1395	1C		N2444	1N,6Y	1N,6Y
N1398	2C		N2444.	1Y	1Y
N1399	2C,3L,3Y	1L,1Y	N2444.45	1N	1N
N1400	2A,3C,3N	3N	N2445	1Y,1N	1Y,1N
N1404	2C,1L,2N	1L,2N	N2460	1B,2C,3N	3N
N1407	4A,2C		N2500	1C,1G,1N	1N
N1409	1SA	1SA	N2512	1WE	1WE
N1410	1SA	1SA	N2517	3N	3N
N1417	2N	2N	N2523	2C,1N	1N
N1421	4N	4N	N2525	1C,1G,1N	1N
N1426	4C,1N	1N	N2532	1B,1C	1WE
N1433	1AL,1N	1AL,1N	N2534	1WE	
N1439	1C		N2535	1B,2C	
N1441	1C		N2536	1B,1C	
N1448	1N	1N	N2537	1B,2C,2E	2E
N1449	1C		N2541	1G,4N	4N
N1451	1C		N2544	1WE	1WE
N1453	1C,1L,1N,1R	1L,1N	N2545	3C,1N	1N
N1461	2N	2N	N2549	1B,2C,2H,2N,1T	2N,1T
N1487	1N	1N	N2551	2C	
N1507	2N	2N	N2552	2N	2N
N1510	4N	4N	N2562	2C,2Y	
N1512	5N,3Y	5N,1Y	N2563	1C,1L,1R,3Y	1L,1R
N1515	1AL,2M	1AL,2M	N2578	2N	2N
N1518	1C,5N	5N	N2583	2N	2N
N1521	2N	2N	N2584	1N	1N
N1531	1N	1N	N2595	1SA	1SA
N1532	1N	1N	N2598	1N	1N
N1532A	1N	1N	N2608	1C,4N	4N
N1533	2M,3Y	2M,2Y	N2613	2C,6N	6N
N1537	1N	1N	N2616	1S	1S
N1543	3M,4Y	3M,2Y	N2623	4N	4N
N1546	2M,2Y	2M,1Y	N2633	3C	
N1549	1AL,3M,4Y	1AL,3M,4Y	N2639	1B,1C,1N	1N
N1553	1AL,3M,4Y	1AL,3M,3Y	N1642	1C,1N	1N
N1559	1M	1M	N2646	2C	
N1560	1G		N2654	1B,1C,2H,1N	1N
N1566	1AL,4M,5SW	1AL,4M,5SW	N2655	1B,2C,1G,1H	
N1569	1C,1G,6U	5U	N2656	2N	2N
N1573	2AH	1AH	N2663	3S	3S
N1574	2M	2M	N2672	2C,2L,2N,3P	2L,2N,3P
N1587	1C,1R	1P	N2672.	2N	2N
N1596	2M,2Y	2M,1Y	N2673	1C,1N	1N
N1600	4A,3C,2L,1N,1PE,3R,3Y	1L,1M,3R	N2681	5A,2C,3F,1G,2H,2N	2N
N1601	1C,1L	1L	N2683	2C,4D,3F,1G,4N	4D,4N
N1603	1R	1R	N2685	2B,3C,1G,2H	
N1614	6N	6N	N2691	1WE	1WE
N1617	1AL,3M,4Y	1AL,3M,3Y	N2693	1B,2C,1H,2N	2N
N1618	2N	2N	N2693.	1B,2F,1H,1N	1N
N1622	2N	2N	N2694	1B,1C,2N	2N
N1625	3N	1N	N2701	3N	3N
N1637	4A,2C,1G,7N	7N	N2712	1B,1C,2H,3N	1N
N1638	3N	3N	N2713	2C,1N	
N1640	2C,1N	1N	N2715	1C,1G,1H	
N1659	1C,3N	3N	N2716	2C,1N	1N
N1667	3N	3N	N2723	1L	1L
N1672	1AL,1SW	1AL,1SW	N2732	2C	
N1700	4A,3C,4N,1R	4N,1R	N2742	2F,3N	3N
N1705	3Y	3Y	N2744	1C	
N1726	1N	1N	N2748	1C	
N1741.	2N	2N	N2749	1C,2N,3P	2N
N1744	1C,1N	1N	N2763	1G,1N	1N
N1784	1G,3N	3N	N2764	6N,5P,1T	6N,3P,1T
N1792	4N	4N	N2768	1B,2C,3F,2H,2N	2N
N1800.	3N	3N	N2775	2C,3F,2H,1N	1N
N1808	5N,1SW	5N,1SW	N2776	1C,2H	
N1832	2C,3N	3N	N2781	2N	2N
N1888	2C,6N	6N	N2782	1C,2H,8N,10,2Z	8N,10,2Z
N1888.	2C,6N	6N	N2784	1L,3N,1T	1L,3N,1T
N1889	1C,1N	1N	N2787	1B,3C,3F	
N1947	1AL,3S,2Y	1AL,3S,2Y	N2798	1B,2C	
N1961	2C,1G,2N	2N	N2799	1N	1N
N1964	1C,1G,3N	3N	N2805	1G	
N2090	1N	1N	N2811	1C,4N	4N
N2139	1C,4N	4N	N2814	3N	3N

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.

NGC	V, B-V	U-B	NGC	V, B-V	U-B
N2820	1G	1L	N3344	2C,1G	2N,1G,1T
N2830	1L	1L,1Y	N3348	1B,3F,2N,1Q,1T	4D,5LY
N2831	2C,1L,1Y	1L,1R,2Y	N3351	1C,4D,3F,1G,5LY	10U,1E,1HI,1WE
N2832	1C,2H,1L,2P,1PE,1R,3Y	2N	N3353	10U,1E,1HI,1WE	
N2835	2N	2N	N3359	2C,1G	
N2839	1Y		N3364	1G	
N2841	4A,2C,5D,2F,1G,2N	5D,2N	N3367	2C	
N2844	2H,4P		N3368	1C,4D,1G,1J,6W,5Y	4D,1J,6W,5Y
N2848	4N	4N	N3377	4A,2C,2R,8W	2R,8W
N2851	1N	1N	N3379	4A,2C,4F,2L,4N,1NF,1Q,4R,	1L,4N,1NF,1Q,4R,7W,4Y
N2855	1C,2L	1L		10W,4Y	
N2859	4A,2C,4F		N3384	1C,2F,3L,4N,3R,6W	3L,4N,3R,5W
N2865	2C,1N,1T	1N,1T	N3389	1C,1F,2N	2N
N2880	1B,1C,1T	1T	N3390	1N	1N
N2888	1T	1T	N3395	1E	1E
N2889	4N	4N	N3412	2C,3F,5W	4W
N2903	2A,3C,5CW,13D,4F,1G	5CW,13D	N3414	4A,1C,3F	
N2911	1C,2L,3N	1L,3N	N3415	1T	1T
N2914	1C		N3423	1G	
N2915	3FR	3FR	N3430	1C,1E	1E
N2916	3N	3N	N3432	1G	
N2935	1N	1N	N3445	1N	1N
N2936	2N	2N	N3448	4N	4N
N2936.	1N	2N	N3471	1WE	1WE
N2937	2N		N3486	1A,2C,2F,1G	
N2942	2H		N3489	2C,1R,7W	1R,6W
N2950	1B,3C,3F		N3504	4A,2C,4CW	4CW
N2955	2H,5P	3P	N3510	2D,1DU,1HI	2D,1DU,1HI
N2962	6P		N3511	1N	1N
N2964	2C,1G,4H	3P	N3512	2A,1C	
N2967	1F,3P	4N	N3516	1B,2C,2E,1LY,11N,7Q,7X,3Z	2E,1LY,11N,7Q,7X,3Z
N2968	1G,4H,4N	1N	N3521	2A,3C,1CW,1E,2F,1G	1E,1CW
N2974	3C,1N	2N	N3547	1N	1N
N2976	1B,1C,4F,1G,2N		N3550	1PE	1E
N2977	1G		N3556	1B,1C,1E,1G	2M,1N,3Y
N2983	2C		N3557	2Y	1Y
N2985	1C,3F,1G	2N,1T	N3557R		
N2986	2C,2N,1T	1N	N3564	1N,2Y	1N,1Y
N2990	1N	1N,1SW	N3585	2C,2N,1T	2N,1T
N2992	1N,1SW	1N	N3593	1C	
N2993	1N	1AL,4N,1SW	N3596	1F	
N2997	1AL,4N,1SW		N3599	4N,3W	4N,3W
N3003	1C,1G		N3605	2C,1F,1W	1W
N3027	1G		N3607	1C,2F,3R,8W	3R,8W
N3031	1A,2C,2D,2E,3F,1G,2K,1NF,6Y	2D,2E,1NF,6Y	N3608	1C,1F,3R,7W	3R,7W
N3032	1C		N3610	1R,2C,3F	
N3034	2B,1C,1E,4F,1G,1J,2K,1NF	1E,1J,2K,1NF	N3611	1C	
N3038	2N	2N	N3613	1B	
N3041	2H		N3619	1B	
N3044	2N	2N	N3621	3N	3N
N3055	1C,3F		N3623	1B,1C,5D,1E,2F,1G,8W,3Y	5D,1E,7W,3Y
N3061	1G		N3626	4A,1C,3F	
N3065	1C,3F,1N	1N	N3627	1B,2C,5D,1E,2F,1G,7W,6Y	5D,1E,7W,6Y
N3066	1AR,1C,1N,1WE	1AR,1N,1WE	N3628	1E,1F,1G	1E
N3067	2C,2N	2N	N3631	4F,1G	
N3077	1C,1E,3F,1G,1N,1Q,3Z	1E,1N,1Q,3Z	N3636	1N	1N
N3078	2C,3N	3N	N3637	1N	1N
N3079	1G		N3640	1C,1N,6P	1N,6P
N3098	2H,1T	1T	N3642	1B,1G	
N3115	2R,4C,3D,7N,1NF,1T	3D,5N,1NF,1T	N3646	1C,1G,4N	4N
N3136	2Y	1Y	N3655	4P	3P
N3147	1B,3C,3F	1T	N3665	1B,1C,1T	1T
N3156	1T	2R,3Y	N3672	1N	1N
N3158	1B,2C,2H,2R,7Y		N3675	1B	
N3159	3Y		N3681	2C	
N3162	6P		N3684	1C	
N3163	3Y		N3686	1C	
N3166	1A,1B,2C,1G		N3689	2N,5P	2N
N3169	1A,1C,1G,1Q	1Q	N3690	1N,1WE	1N,1WE
N3175	1N	1N	N3690.	1N	1N
N3177	6P	3P	N3717	2N	2N
N3183	1G		N3718	2F,1G	
N3184	1B,2C,1F,1G		N3719	1N	1N
N3185	1C,2F,1G		N3720	1N,1T	1N,1T
N3187	1G,1N	1N	N3725	1WE	1WE
N3188	1WE	1WE	N3726	1B,2F,1G	
N3190	1C,2F,1G,3N,2Y	3N,2Y	N3729	2F,1G	
N3193	1C,2F,1G,1L,3N,2R,3Y	1L,3N,2R,2Y	N3737	1PE	
N3198	1G		N3738	3F,1G,2N	2N
N3200	1N	1N	N3756	2F,1G	
N3222	1C		N3764B	1SA	1SA
N3223	1N	1N	N3773	1T	1T
N3226	1C,1N,1T	1N,1T	N3780	3F	
N3227	1C,1D,1LY,14N,3Q,7X,3Z	1D,1LY,14N,3Q,7X,3Z	N3783	1SW	1SW
N3239	1C	2N	N3801	2N	2N
N3241	2N	1L	N3802	1N	1N
N3245	2C,1L	1Y	N3804	1F	
N3250	3Y		N3810	1A,2C,3D,1F,1G	3D
N3254	1C		N3813	3N	3N
N3256	1AL,3M	1AL,3M	N3818	1C,1T	1T
N3258	3Y	2Y	N3842	1PE	
N3268	4Y	1Y	N3846	1F	
N3271	3Y	1Y	N3862	1S,8Y	1S,5Y
N3274	3P	3P	N3870	1WE	1WE
N3277	2C,7P,1Q	4P,1Q	N3872	1C,1T	1T
N3281	3Y	1Y	N3887	2N	2N
N3294	1A		N3888	1F	
N3301	1C,9P	4P	N3893	1B,3F	
N3308	2N,4Y	2N,1Y	N3898	1A,4F	
N3309	3N,1PE,2Y	3N	N3900	2C	
N3310	1B,2C,3P,5WA	3P,5WA	N3904	1C,2N,1T	2N,1T
N3311	2Y	1Y	N3921	1F	
N3319	1G		N3923	1C,1T	1T
N333A	1C,1G		N3938	1F,1G	

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.

NGC	V, B-V	U-B	NGC	V, B-V	U-B
N3941	1B,1T	1T	N4303A	1G	
N3945	2AN,1B	2AN	N4304	2N	2N
N3949	1B,1F		N4305	3P	
N3953	1B,2C,4F,1G		N4312	1G	
N3955	6S	6S	N4314	2C,4LY	4LY
N3962	1C,1T	1T	N4321	3A,3B,5D,1E,4F,1G,1H,4LY	5D,1E,3LY
N3972	2F		N4322	2B,1Y	1Y
N3982	3F		N4328	1B,2Y	2Y
N3990	1B,1E	1E	N4339	2R,3P	3P
N3991	2E	2E	N4340	3F,1H	
N3991A	1DU	1DU	N4343	1G	
N3992	1B,1E,3F,1G	1E	N4348	1N	1N
N3994	2E	2E	N4350	1C,2F,1H	
N3995	2E	2F	N4351	3P	
N3998	1B,4D,3F,1E	4D,1E	N4352	2D	2D
N4008	1E	1E	N4360	1D	1D
N4026	1B		N4365	2R,5D,2F,1N,2R	5D,1N,2R
N4027	1E,6N	1F,6N	N4371	1F,1G	1Y
N4030	1E,4F	1E	N4373	3Y	
N4036	1B,1E,1G	1E	N4374	4A,1B,2C,6D,2E,1F,1G,1H,1NF,5R,8S,3Y	6D,2E,1NF,5R,8S,2Y
N4038	1E	1E			
N4038*	1B		N4377	2F,4P	3P
N4038*	1B		N4379	1C	
N4039	1N	1N	N4382	1A,1B,5D,3F,1G,2R	5D,2R
N4039*	1E	1E	N4385	1N,4WE	1N,4WE
N4041	1E,1G	1E	N4387	2C,2B,2D	2D
N4045	1E,4N	1F,4N	N4388	1G,1H	
N4045A	2N	2N	N4394	2C,2F,1G,1NF	1NF
N4050	1N	1N	N4395	1G	
N4051	1B,3E,3F,1G,1LY,17N,30,3X,1Y,2Z	3E,1LY,17N,30,3X,1Y,2Z	N4402	1E,1G,2H	1E
			N4406	4A,1B,7D,2E,2F,1G,1H,1NF,4R,1S	7D,2E,1NF,4R,1S
N4062	1E	1E			
N4064	1N	1N	N4410.	1G	
N4085	1F,1G		N4411A	1G	
N4088	3D,1E,2F,1G	3D,1E	N4411R	1G	
N4096	1F,1G		N4413	1F	
N4100	1F		N4414	1A,2C	
N4102	1B,3F		N4417	2A,3D,1G	3D
N4105	1C		N4419	2C	
N4106	1C,1N	1N	N4421	2C,5D,3F,2N	5D,2N
N4111	2AN,2B,4CW,1G,2N	2AN,4CW,2N	N4424	2A,1G	
N4116	1C,1G		N4425	1A,1C,2F,1G	
N4123	2E,1G	2E	N4428	1N	1N
N4124	2F,1N	1N	N4429	2A,1C,5D,1G	5D
N4125	1B		N4431	1D	1D
N4129	1N	1N	N4433	1N	1N
N4138	1B		N4435	4A,2C,6D,2E,3F,1G,1H	6D,2E
N4143	1B		N4436	1D	1D
N4145	4N	4N	N4438	4A,2C,5D,1E,4F,1G	5D,1E
N4150	1C,4P		N4440	2C,2F,1H	
N4151	2B,4CW,3E,7F,1,2LY,20N,40,6X,1Y,2Z	4CW,3E,7F,1,2LY,20N,40,6X,1Y,2Z	N4442	2A,1C,5D,1G	5D
			N4445	2A,1G	
N4152	3F,2N	2N	N4448	1C	
N4156	2E,3N	1E,3N	N4449	2R,2D,2E,3F,1G,1NF	2D,2E,1NF
N4162	3P	3P	N4450	1A,1B,5D,2F,1G	5D
N4165	1G,2N	2N	N4451	2A,1C	
N4168	2B,1E,2F,1G,1J0	1E,1J0	N4452	1C,2D	2D
N4178	1G		N4454	3P	2P
N4179	2C,5D,1N	5D,1N	N4457	5D	5D
N4189	4F,1G		N4458	1A,1B,2D,1E,2F,1H,2R	2D,1E,2R
N4192	1A,1C,5D,1E,3F,1G	5D,1E	N4459	3A,1C,5D,3F,1NF	5D,1NF
N4193	1G		N4461	2A,1C,1E,3F,2H	1E
N4194	4N,1WE	4N,1WE	N4466	1B	
N4203	2C,1T	1T	N4467	1R	
N4206	1G		N4468	2H	
N4212	1E,2F,1G	1E	N4472	3A,2B,5D,1E,3F,1G,1NF,1R	5D,1E,1NF,1R
N4214	1B,2E,2F,1G,1NF	2E,1NF	N4473	2A,2C,5D,2F,1H,5R	5D,5R
N4216	1A,1B,7D,1E,3F,1G	7D,1E	N4474	1C,1F	
N4220	1B		N4476	1B,2D,1E,3F,3H	2D,1E
N4224	1G		N4477	2A,1C,5D,2F,1H	5D
N4233	1G		N4478	2A,1C,3D,1E,2F,2H,1NF,1R,1S	3D,1E,1NF,1R,1S
N4234	1D,1E	1D,1E			
N4235	1G		N4479	2A,1C,2D,2F,2H	2D
N4236	1G,1N	1N	N4480	1G	
N4237	2C,1F		N4485	1B,1E,1G	1E
N4241	1G		N4486	3A,1B,11D,4E,3F,1G,2H,1J0,2N,1NF,2R,8S,4Y	11D,4E,1J0,2N,1NF,2R,7S,4Y
N4242	2F,1G,1N	1N			
N4244	1B,1C,1E,1F,1G	1E	N4486A	2D,1N	2D,1N
N4245	1B,3D	3D	N4486B	1B,1C,1D,5N	1D,5N
N4246	1G		N4490	1A,1B,1E,2F,1G	1E
N4248	1G		N4491	1C	
N4251	1B		N4492	1C	
N4254	3A,1B,5D,1E,1F,1G,1H	5D,1E	N4494	2R,4P,1T	4P,1T
N4258	1B,1C,2E,2F,1G,1Q,3WA,2Z	2E,1Q,3WA,2Z	N4496.	1G	
N4259	1A,1G		N4497	2D	1D
N4260	2N	2N	N4501	4A,1B,10D,1E,3F,1G	10D,1E
N4261	3A,1B,5D,1F,1N,6P,2R,1S,3Y	5D,1N,4P,2R,1S,2Y	N4503	3D	3D
N4262	2C,2F,4H,6P	6P	N4517	3D,1G	3D
N4264	1A,1S	1S	N4517A	1G	
N4267	1B,3F,4H,6P	4P	N4519	1G,1N	1N
N4268	1A,1G,1N	1N	N4526	2C,5D	5D
N4270	1A,1B,1G,1N	1N	N4527	1C,5D,1G	5D
N4273	1A,2C,1G,1N	1N	N4528	1C,3D	3D
N4274	1C,2D,2F,1G,3N,1R	2D,3N,1R	N4532	1G	
N4277	1G		N4535	3A,5D,2F,1G,1N	5D,1N
N4278	1B,4D,4F,1G,1J0,3N,2P	4D,1J0,3N,2P	N4536	1A,5D,1G	5D
N4281	1A,1C,1G,1N	1N	N4539	1G	
N4283	1B,1D,2F,1G,2N,2P	1D,2N,2P	N4546	1C	
N4291	1B		N4548	1C,9D,1E,2F,1G,1H	9D,1E
N4293	1A,5D,1F	5D	N4550	1A,1C,5D	5D
N4294	2F,1G		N4551	1A,2B,3D	3D
N4298	1G		N4552	1A,2C,5D,3F,1H,1NF,1R	5D,1NF,1R
N4299	2F,1G		N4559	1A,1E,1F,1G	1E
N4302	1G		N4564	2C,2D,1G	1G
N4303	3A,2C,5D,1F,1G	5D	N4565	1B,2D,1E,1F,1G	2D,1E

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.

NGC	V, B-V	U-B	NGC	V, B-V	U-B
N4567	1G		N4911	2C,2D	2D
N4568	1G		N4914	1T	1T
N4569	1A,1C,5D,1E,3F,1G	5D,1E	N4915	2C	
N4570	1C		N4921	1C,4D,2N,4Y	4D,2N,4Y
N4571	2F,1G		N4923	3Y	3Y
N4576	1G		N4926	2C	
N4578	1B,2C		N4931	1C	
N4579	3A,2B,10D,1E,1G,1R	10D,1E,1R	N4936	2N,1Y	2N,1Y
N4586	1G		N4939	6N	6N
N4589	1B		N4941	1C	
N4594	1A,1B,1E,1G,1K	1A,1E	N4957	1C	
N4596	1G		N4958	2C	
N4605	1E	1E	N4961	1C	
N4606	1G		N4976	1A,1,3M	1A,1,3M
N4607	1G		N4992	1D	1D
N4608	1G		N4995	2C	
N4618	2E,2F,1G	2E	N5005	1A,1B,2C,3CW,4D,1E,1G	4D,1E
N4621	1A,1C,5D,1F,2R	5D,2R	N5018	1C	
N4625	2E,1G	2E	N5033	1A,1C,3CW,1E,3F,1G	3CW,1E
N4627	1C,1D,1E,1G	1D,1E	N5044	4R,6Y	4R,6Y
N4631	1A,1C,2CW,1E,1F,1G	2CW,1E	N5049	2C	
N4633	1G		N5055	1R,4CW,5D,1E,4F,1G,1J,1O	2CW,5D,1E,1J,1O
N4634	1G		N5074	1N	1N
N4636	1B,5D,6P	5D,6P	N5076	1R	1R
N4638	1A,1C		N5077	1C,2R,7Y	2R,6Y
N4639	1G		N5087	1C	
N4643	8D	8D	N5102	1A,1,4N	1A,1,4N
N4647	1A,1C,1G		N5112	1E	1E
N4649	1A,1B,1C,5D,1G,1NF	5D,1NF	N5128	1G,4KU,3VB	4KU,3VB
N4649.	4F		N5134	1N	1N
N4651	5D,2F,1G	5D	N5140	3Y	1Y
N4653	1G		N5141	1N	1N
N4654	5D,3F,1G,2N	5D,2N	N5142	1N	1N
N4656	1E,1F,1G	1F	N5147	5N	5N
N4660	1A,1C		N5172	2P	2P
N4665	5D	5D	N5173	1R,1N	1N
N4666	1A,2C,2D,1G	2D	N5194	1B,2C,2CW,4D,1E,2F,1G,1NF,7PN	4D,1E,1NF,7PN
N4668	1G		N5194.	1K	
N4670	10U,2E	10U,2E	N5195	1R,2C,1D,1E,1G,1NF,3PN	1D,1E,3PN
N4677	1M	1M	N5198	1B,1T	1T
N4683	1M	1M	N5204	1C,1G	
N4689	1G		N5216	1N	1N
N4691	1E	1E	N5218	1N	1N
N4692	1E	1E	N5236	1A,1,2C,2E,1F,4N,5S	1A,1,2E,4N,5S
N4696	2M,2S,3Y	2M,2S,2Y	N5247	2N	2N
N4697	1C,3N	3N	N5248	2A,2C,5CW,9D,1E,3F,1G	5CW,9D,1E
N4698	1C,5D,1G	5D	N5253	1A,1E,4N,1SW	1A,1E,4N,1SW
N4699	2C,5D	5D	N5273	1B,1E,5P,1T	1E,4P,1T
N4701	4P	1M	N5283	1WE	1WE
N4706	1M	1M	N5297	4F	
N4709	1M,1Y	1M,1Y	N5300	1N	1N
N4710	1A,1C		N5302	4Y	
N4712	1G		N5308	1R,2C	
N4713	2D	2D	N5322	2R,2C,1E,3F	1E
N4725	1B,3F,1G		N5324	1N	1N
N4736	1B,1E,4F,1G,1J,1K,4WA	1E,1J,4WA	N5328	1C	
N4742	1G		N5347	2P	2P
N4744	1M		N5350	2Y	2Y
N4747	1G		N5351	3P	
N4753	2C,1E,3N	1E,3N	N5353	1C,2R,3Y	2R,3Y
N4754	1C,4N	4N	N5353.	3Y	2Y
N4762	2AN,1C,6D,2N	2AN,6D,2N	N5354	1C,5Y	3Y
N4774	2N	2N	N5355	1Y	1Y
N4775	1N		N5363	3A,1B,2C,5D,1G,3N	5D,2N
N4781	1N	1N	N5364	2A,1C,5D,2F,1G	5D
N4782	1S,5Y	1S,4Y	N5371	1C,2F,8Y	5Y
N4782.	1Y	1S	N5375	2N	2N
N4782.	1S	1S	N5377	2C	
N4783	1S,5Y	1S,4Y	N5383	2CW,1E,1WE	2CW,1E,1WE
N4789	1C		N5394	1E,1C	1E
N4793	2C		N5395	1C,1E,1SA	1E
N4798	1C		N5419	1S	1S
N4800	1B		N5426	2C,1E,1G	1E
N4814	1B		N5427	2C,1E,1G	1E
N4825	1N	1N	N5448	1B	
N4826	2B,3CW,1E,1F,1G,1K,4N	3CW,1E,4N	N5457	1C,1D,1E,1F,1G,1K,2PN	1D,1E,2PN
N4827	1C		N5468	1N	1N
N4841.	1C		N5473	2C,1E	1E
N4850	2C		N5474	1C,1E,2F,1G	1E
N4853	2C,2RB		N5477	1N	1N
N4856	2C		N5485	1R,1C,5P	1N
N4860	2C,1RB		N5490	1S	1S
N4861	2C		N5493	2C	
N4864	1C		N5496	1N	1N
N4865	2C,2D,1RB	2D	N5532	1S,8Y	1S,3Y
N4866	1C		N5533	1R,1C	
N4867	1C		N5534	1N	1N
N4869	2C		N5548	1B,1C,3CW,25N,6WE,7X,1Z	3CW,25N,6WE,7X
N4872	1B,2C		N5557	1B,1C,1N,7P,1R	1N,5P
N4873	2H,2WE,4Y	3Y	N5560	1D,1E	1D,1E
N4874	2A,1B,3C,3D,6E,2H,1PE,3R,8RB,4Y	3D,6E,3R,4Y	N5566	1C,3D,2E,1L	3D,2E,1L
N4881	1C,2D,10RB,5U,3Y	2D,3Y	N5574	1C,1E,1L	1E,1L
N4883	3Y	3Y	N5576	1C,6D,1E,2L,1R	6D,1E,2L
N4886	1C,1RB,2WE,3Y	3Y	N5585	1C,1G	
N4889	2A,1B,3C,2D,2H,4R,1RB,4Y	2D,4R,4Y	N5597	1N	1N
N4895	2C,1RB		N5600	1E	1E
N4896	1C		N5614	1R,4P	2P
N4898.	1C,5D,3F	5D	N5631	1R,1T	1T
N4900	2C,2N	2N	N5633	2C,2D	2D
N4904	1E	1E	N5638	1C,1N,1R	1N
N4906	3Y	3Y	N5645	1A,1N	1N
N4907	1C,4D	4D	N5653	7P	5P
N4908	1C		N5660	1E	1E
			N5668	2C	

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.

NGC	V, B-V	U-B	NGC	V, B-V	U-B
N5672	1B,2C,1Y	1Y	N6703	1C,2N,4R	2N,4R
N5676	3C,5D	5D	N6710	2C	
N5682	2N	2N	N6721	3Y	
N5683	2N	2N	N6729	1D	1D
N5687	1C		N6744	1AL	1AL
N5689	1C		N6753	1AL	1AL
N5690	1A		N6769	1M,3Y	1M,1Y
N5691	1N	1N	N6770	1M,2Y	1M
N5701	1A,1L		N6771	1M,1Y	1M
N5713	1C,2E,3F	2E	N6776	3Y	1Y
N5728	1A		N6814	2A,3C,7N,1WE	7N,1WE
N5740	1A,1C,1E,1G	1E	N6822	1G	
N5746	2C,1E,1G	1E	N6824	1C	
N5750	1N	1N	N6835	1A,1N	1N
N5757	1A		N6851	1M	1M
N5774	1G		N6861	1M,4Y	1M,1Y
N5775	1G		N6861D	1M	1M
N5791	1A		N6868	1M	1M
N5793	1N	1N	N6870	1M,2Y	1M,1Y
N5796	1N	1N	N6872	5S	5S
N5806	1C		N6875	1M	1M
N5812	1C		N6876	3S,4Y	3S
N5813	1B,3C,1N,4P,5Y	1N,4P,4Y	N6877	1S,4Y	1S
N5820	1B,1C,2N,1T	2N,1T	N6878	1M	1M
N5831	1B,1C,1E,4P,5M,2Y	1E,3P,5R,2Y	N6890	1N	
N5838	1B,1C,1E,2N,2R,4Y	1E,2N,3Y	N6893	1M	1M
N5839	1A		N6902	1N	1N
N5845	1A		N6906	4N	4N
N5846	1A,5D,1G,1J,4P,5R,6Y	5D,1J,4P,5R,4Y	N6907	1M,2N	2N
N5846A	2A,1B,1C,2E,3F,1N	2E,1N	N6909	1M	1M
N5846A	1B,2C,2Y		N6921	1A,1C	
N5850	3C,2D,2E,1F,1G,3N,2Y	2D,1E,3N,1Y	N6923	3N	3N
N5854	1C,2N	2N	N6923A	1N	
N5857	1C		N6925	2N	2N
N5857	1C		N6926	3N	3N
N5859	2C		N6927	1C	
N5861	1N	1N	N6928	3C	
N5864	2N,1T	1N,1T	N6929	3N	
N5866	1B,1C,5D,1E,1T	5D,1E,1T	N6930	1C	
N5878	1C,1N	1N	N6944	1C,1D,1R	1D,1R
N5879	2B,2C,1E	1E	N6946	1A,1C,1F,1G,4U	4U
N5885	1N	1N	N6951	1A,2C,1G,5N	5N
N5898	1A,1C,1N,3Y	1N	N6954	1C	
N5899	1B,1C,3N	3N	N6962	2C	
N5903	1A,1C,1N,3Y	1N	N6963	2C	
N5907	1C,1E,1G,6D	6D,1E	N6964	3C,1D	1D
N5908	1N	1N	N6970	2Y	1Y
N5915	1N	1N	N7013	1A,2N	2N
N5920	5Y	2Y	N7014	4Y	1Y
N5921	1B,2C,5N	5N	N7029	1N	1N
N5936	2A,2N	2N	N7041	3Y	1Y
N5962	1B,1C,2F,4N	4N	N7049	1AL,3Y	1AL,1Y
N5970	1B,1C,2F,3N	3N	N7065	1N	1N
N5976	1C		N7070	2N	2N
N5981	1B,1C		N7070A	1N	1N
N5982	1B,1C,5D,1E,1F,1J,4P	5D,1E,1J,4P,2P	N7070B	1N	1N
N5984	1N	1N	N7072	1N	1N
N5985	2B,3D,1E	3D,1E	N7079	1N	1N
N6015	2B,1C,1E,1G,2N	1E,2N	N7090	1AL	1AL
N6020	2R		N7097	1N	1N
N6027	4Y	2Y	N7102	2N	2N
N6027	2C		N7135	4N	4N
N6027A	1C,1Y		N7137	2C,2H,3N	3N
N6028	2SA	2SA	N7144	1M,4Y	1N
N6041A	2R	2R	N7145	1N,4Y	1N
N6044	1R	1R	N7156	2N	2N
N6045	2N,1PE	2N	N7162	1N	1N
N6047	2N,2R	1N,2R	N7163	1N	1N
N6048	1N	2N	N7166	2N	2N
N6051	2N	1N	N7171	2C,3N	3N
N6052	1D,1E,3N,1WE	1D,1E,3N,1WE	N7172	4N	4N
N6070	1C,1E,1N	1E,1N	N7173	2N,4Y	2N,1Y
N6086	1PE		N7174	1N	1N
N6106	2A,4N	4N	N7176	1N,1Y	1N
N6118	1A,1N	1N	N7176.	1N	1N
N6166	2M,1N,1PE,3Y	2Y	N7177	1A,1B,3C,2H,6N	6N
N6173	1PE		N7180	2N	2N
N6181	2C,1F,7N	7N	N7184	1N	1N
N6196	4N	4N	N7185	1N	1N
N6207	1B,1C,5D,1E,1F,1HC,2WE	5D,1E,1HC,2WE	N7188A	1N	1N
N6217	1B,1C,1E,2F	1E	N7196	4Y	
N6221	1AL	1AL	N7213	1AL,1M,4Y	1AL,1M,1Y
N6239	2C,3D,3N	3D,3N	N7214	3N	3N
N6314	2C		N7217	1A,2B,2C,1G,2H,5N	5N
N6315	4N	4N	N7218	2N	2N
N6340	2C,5D,1N	5D,1N	N7232	3S	3S
N6359	1A,1C		N7236	4Y	2Y
N6384	1A,2C,1E,1G	1E	N7236.	1S	1S
N6412	1C,1G,1N	1N	N7237	5Y	2Y
N6482	1A,1C,6N,2R	6N,2R	N7237.	1Y	
N6501	2R	2R	N7240	2C	
N6503	1B,1C,5CW,7D,1E,1F,1G	5CW,7D,1E	N7242	1C,1N,3R,3Y	1N,3R
N6574	2A,1B,2C,2D,4N	2D,4N	N7242A	1Y	
N6587	3N	3N	N7244	1WE	1WE
N6615	1A		N7252	1C,5N	5N
N6621.	1N	1N	N7274	1PE	
N6627	1A,1C		N7300	1N	1N
N6635	1A,1C		N7302	2C,3N	3N
N6643	2C,1G,2N	2N	N7309	3N	3N
N6654	2C		N7314	2C,1N	1N
N6658	1A,3C,2F		N7316	1WE	1WE
N6661	1A,3C,2F,1R		N7317	2C,4N	4N
N6674	2C		N7318.	2C,2N	2N
N6684	4Y	4Y	N7318A	3C	
N6702	2C,2N	2N	N7318B	2C	

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.

NGC	V, B-V	U-B	NGC	V, B-V	U-B
N7319	1C,2N	2N	10750	2P	1P
N7320	3N	3N	10775	2H	2Y
STEPHANS	2N	2N	10783	1R,2Y	2Y
N7320C	1N		10783A	1R,2Y	2Y
N7331	3C,2CW,3D,2F,1G,2N,2R,2Y	2CW,3D,2N,2R,2Y	10803.	1N	1N
N7332	1R,2C,4L,2N,3P,2R	4L,2N,2R	10883	1SA	1SA
N7339	1R,1C,1N	1N	11065	3Y	3Y
N7343	1C,1D	1D	11182	1WE	1WE
N7361	2N	2N	11183	1R,1C,1R	1R
N7371	2N	2N	11185	2C	
N7377	2C,1N	1N	11194	2C,1R	
N7383	1N,2R	1N	11254	1N	1N
N7385	1C,5N,4R,1S,2Y	5N,1S	11302	1C	
N7386	1C,3N,2R,1S,3Y	3N,1S	11303	1A	
N7387	2R	2R	11317	2C	
N7389	2R	2R	11459	2M,2N,6Y	2M,2N,4Y
N7392	1C,2N	2N	11460	2C	
N7410	2M	2M	11565	1PE	
N7412	1M	1M	11613	1C,1G,2U	
N7413	5Y	2Y	11653	1AH	1AH
N7416	2N	2N	11727	1C,1G,1N	1N
N7418	2M	2M	11783	1N	1N
N7421	2M		11784	1G	
N7424	1AL,1M	1AL,1M	11788	2N	2N
N7448	1A,1B,2C,2N	2N	11830	1DU	1DU
N7457	1A,1B,1C,3H,1N,1R	1N,1R	11854	1WE	1WE
N7468	1WE	1WE	11876	1DU	1DU
N7469	1A,1C,2CW,4LY,8N,13Q,4WE,3X,3Y	2CW,4LY,8N,11Q,4WE,3X,3Y	12082.	2S	2S
N7479	1A,2C,2CW,2D,2N,1R	2CW,2D,2N	12179	4N	4N
N7496	1AL,1M	1AL,1M	12184.	1WE	1WE
N7499	1C		12209	1N,1WE	1N,1WE
N7501	1C		12233	1G,3N	3N
N7503	2C,1S,2Y	1S	12378	1PE	
N7507	2C,2N	2N	12389	1C	
N7513	1N	1N	12537	1M	1N
N7525	1WE	1WE	12565	1SA	1SA
N7531	1H	1M	12565A	1SA	1SA
N7537	1C,4N	4N	12574	1G	
N7541	1A,1C,5N	5N	12627	1N	1N
N7552	1AD,1AL,4M,3N	1AD,1AL,4M,3N	12738	1PE	
N7562	4C,1R,3Y	1R	12943	1WE	1WE
N7576	1C		12987	1WE	1WE
N7582	1AD,3M	1AD,3M	13061	1G	
N7585	1C,1N,1R	1N	13115	1G	
N7590	1AD,3M	1AD,3M	13256	1G	
N7599	3M	3M	13259	1G	
N7600	1C,1N	1N	13260	1G	
N7603	1WE	1WE	13267	1G	3Y
N7606	2C,1N	1N	13370	3Y	1D
N7611	3C,2L,3R	2L,3R	13427	2D	1D
N7617	1C,2L,2R	2L,2R	13468	2D	1D
			13470	1D	1D
N7619	4A,5C,1D,3L,2R,1S,3Y	1D,3L,1S	13475	2E	2E
N7620	1WE	1WE	13476	2H	2H
N7623	2C,1D,2L,3R	1D,2L,3R	13481	10	10
N7624	1WE	1WE	13481	1N	1N
N7625	1C,2N,1R	2N,1R	13483	1N	1N
N7626	4A,6C,1D,2L,2R,1S,6Y	1D,2L,2R,1S	13499	2D	2D
N7640	1C,1G,3N	3N	13611	2D	2D
N7649	6Y		13730	1DU	1DU
N7671	1C		13896	1M	1M
N7673	5AH,1SA,1WE	5AH,1SA,1WE	13946	2C	
N7677	1WE	1WE	13998	3Y	3Y
N7678	2C,1N,1R	1N,1R	14011	5E,3Y	5E,3Y
N7679	1A,1C,1N,2R	1N,2R	14012	1C,3Y	3Y
N7682	2C		14021	2C,5RB,2WE,2Y	2Y
N7702	4Y	1Y	14026	3Y	3Y
N7716	1A,2C,2H,2N	2N	14042	3Y	3Y
N7720	4Y		14045	1C,1RB	
N7720.	1PE,5Y		14051	1C,2D,9RB	2D
N7720A	3Y		14296	7S,3Y	7S
N7721	3N	3N	14299	3S,1Y	3S,1Y
N7723	1A,3C,4N	4N	14329	4Y	
N7727	1A,3C,1N	1N	14329A	2DY,3Y	2DY
N7741	3C,1G,2H,5N	5N	14662	1AL,1S	1AL,1S
N7742	2C,3R	3R	14797	3Y	1Y
N7743	1A,1C		14842	2Y	3S
N7755	2N	2N	14970	3S	3N
N7764	1N	1N	15039	3N	2Y
N7768	1PE		15063	4Y	3N
N7769	2C		15105	3N	1N
N7770	1C		15131	1N	5N
N7771	1C		15135	5N	1N
N7782	1A		15181	1N	1N
N7785	1A,1C,4N	4N	15186	1N	3M,2N,1Y
N7793	1A,1AL,1C,3N	1AL,3N	15267	3M,2N,2Y	1AL,1M
N7814	2A,2C,1N,1R	1N,1R	15273	1AL,1M	1N
10010	1C,4N	4N	15283	1N	1AL,1N
10080A+B	1C,1PE,4Y		15328	1AL,1N	2N
10115	1N	1N	15332	2N	1N
10195	1N	1N	15338	1N	1AR
10196	1N	1N	A0001+21	1AR,1WE	1AR,1WE
10235	1WE	1WE	A0003+19		
10239	1G		A0004-07A	1N	
10298A+B	1N	1N	A0004-07A+	1N	
10342	1A,2C,5N,6U	5N,2U	A0004-07B	1N	
10356	1A,5U	3U	A0036-21	1HI	1HI
10391	1C		A0038-01	1N	2N
10399	2N	2N	A0043+37	1KN,2N	1HI
10450	2WE	2WE	A0046-13	1HI	1DU
10529	1G		A0046-12	1DU	1WE
10691	1WE	1WE	A0057+31	1WE	1N
10694	1N	1N	A0102-06	1N	1FA
10712	1PE		A0120+34	1FA	1SA
10749	2P	2P	A0141+16	1SA	

APPENDIX M. SOURCES OF MAGNITUDES AND COLORS.

NGC	V, B-V	U-B	NGC	V, B-V	U-B
A0146-27	1DU	1DU	A1129-71A	1Y	1Y
A0147-27	1DU	1DU	A1129-71B	1Y	1Y
A0151-36	1WE	1WE	A1129-71C	1Y	1Y
A0206-35	1N	1N	A1129-71D	1Y	1Y
A0209-37	1N	1N	A1129-71E	1Y	1Y
A0211-03	1SA	1SA	A1130-49	1WE	1WE
A0220-41A	1N	1N	A1137-28	1HI	1HI
A0220-41A+	3N	2N	A1151-09	1N	1N
A0220-42	4Y		A1151-46	1WE	1WE
A0234-34	1C		A1152-55A	2N	2N
A0235-02	1N	1N	A1152-55B	1N	1N
A0246-00	1SA		A1200-64	1WE	1WE
A0255-05A	3Y		A1205-67	1WE	1WE
A0255-05B	3Y		A1206-47	1AR,1WE	1AR,1WE
A0255-05.	1PE,1S,4Y	1S	A1207-17	1SA	1SA
A0300-16	5Y	2Y	A1212-06	1DU	1DU
A0325-17	1DU,1HI	1DU,1HI	A1216-04.	1DU,1WE	1DU,1WE
A0325-02	8Y		A1221-04	1WE	1WE
A0331-39	1N	1N	A1221-67	1WE	1WE
A0340-39	1PE		A1223-49	1DU	1DU
A0356-10	7Y	1Y	A1230-46	1WE	1WE
A0411-24	2N	2N	A1232-06	1G	
A0430-05	2N,3SA,4WE,7Y	2N,3SA,4WE,7Y	A1238-28B	1DU	1DU
A0437-04	1C		A1241-55A	1WE	1WE
A0449-17	1S	1S	A1241-55.	1DU	1DU
A0459-03	2N	2N	A1242-28	1DU	1DU
A0510-33	1N	3N	A1244-51	1DU	1DU
A0513-06	1PE		A1246-41A	1M	1M
A0518-45	1S	1S	A1246-41B	1M	1M
A0553-03	1SA	1SA	A1246-34	1DU	1DU
A0600-07	1SA	1SA	A1247-41	1M	1M
A0609-71	6WE	6WE	A1248-40	1M	1M
A0644-74	1GR		A1254-32.	1C	
A0708-73A		6Y	A1254-57	2AR,4WE	2AR,4WE
A0708-73A+	1Y	1Y	A1256-14	2L	
A0708-73B	1Y	1Y	A1256-27C	2PB,1WE	1WE
A0722-09	1S	1S	A1310-36	1G	
A0727-63	1DI		A1311-35	1SA	1SA
A0732-58	4WE	4WE	A1312-55	1WE	1WE
A0737-65	1WE	1WE	A1313-07	2N	1N
A0738-49	2DI,3LY,6WE	2DI,3LY,6WE	A1323-57	1WE	1WE
A0743-61	6LY,4WE	5LY,4WE	A1326-31	1N	1N
A0745-56A	1N	1N	A1333-29	1DU	1DU
A0745-56B	1N	1N	A1337-43	1WE	1WE
A0752-39	1WE	1WE	A1338-54	1G	
A0805-72	1WE	1WE	A1342-56	1AR,1WE	1AR,1WE
A0811-58	1PE		A1346-26	1N	1N
A0813-70	1G		A1351-69	3AR,2WE	3AR,2WE
A0824-55	1WE	1WE	A1352-54	1G	
A0825-52	2DI	2DI	A1407-01	1N	1N
A0832-46	2DI	2DI	A1409-65	2FR	1FR
A0832-66	2DI	2DI	A1420-33	1WE	1WE
A0844-70	2DI	2DI	A1426-27	1DU	1DU
A0845-46	2DI	2DI	A1427-22	1N	1N
A0846-72	1DI	1DI	A1428-27	1DU	1DU
A0847-61	1DI	1DI	A1439-53	1SA,2Y	2Y
A0847-73	1WE	1WE	A1448-07A	1N	1N
A0854-66	2AR,1WE	2AR,1WE	A1448-07B	1N	1N
A0901-51	2DI	2DI	A1448-35	3SA	3SA
A0908-46	1WE	1WE	A1449-35	3SA	3SA
A0909-74	1G	1G	A1514-07	1PE,2Y	
A0913-53	2DI	2DI	A1515-23	1Y	1Y
A0915-11	1S	1S	A1534-58	2AR,1WE	2AR,1WE
A0915-71	1DI,1WE	1DI,1WE	A1600-16C	1PE	
A0917-71	1WE	1WE	A1601-19	1WE	1WE
A0923-68	1DI,1WE	1DI,1WE	A1610-60	1S	1S
A0930-55A	1SA		A1622-41	4Y	4Y
A0936-32A	1SA	1SA	A1631-35	1SA	1SA
A0936-71	1G		A1636-42A	1N	1N
A0943-54A	1N	1N	A1636-42B	1N	1N
A0943-54B	1N	1N	A1636-42B	1N	1N
A0944-58	1WE	1WE	A1652-39	1WE	1WE
A0947-28	1DI,1HI	1DI,1HI	A1659-29	1WE	1WE
A0953-69	1KA	1KA	A1717-00	3Y	1Y
A0956-30	1G		A1720-30	1WE	1WE
A0957-05	1C,1G		A1834-19	1S	1S
A1000-59	1WE	1WE	A1836-17	1LN,1Y	
A1001-66	1KA		A1852-54	2Y	1Y
A1003-29	1DU,1HI	1DU,1HI	A1940-50	3Y	
A1005-12	1G		A1954-40	1C	
A1008-04	1C,1G		A1955-40	1C	
A1012-21	1SA	1SA	A2040-26	1S	1S
A1013-45	1WE	1WE	A2058-28	1S	1S
A1015-64	2DI,1WE	2DI,1WE	A2058-15	1C	
A1025-19	1HI,3SA	1HI,3SA	A2058-16	1C	
A1029-54	1DU,1HI,1WE	1DU,1HI,1WE	A2059-15	1C	
A1031-11	1N	1N	A2105-03	1SA	1SA
A1034-64	1WE	1WE	A2143-21	1C	
A1046-26	1DU,1HI	1DU,1HI	A2152-69	1S	1S
A1048-44	1WE	1WE	A2229-39	5Y	
A1055-72	1AR	1AR	A2236-35	1PE	
A1059-45	1WE	1WE	A2239-19	1AR,1WE	1AR,1WE
A1101-41.	2E,2N	2E,2N	A2257-25	1N	1N
A1102-29	1DU,1HI,1WE	1HI,1WE	A2301-22	2SA,3WE	2SA,3WE
A1110-22	1G		A2316-24	1WE	1WE
A1113-29	1PE,2Y		A2326-14	1G	
A1115-63	1WE	1WE	A2326-17	1N	1N
A1116-62	1AR	1AR	A2335-30	2N	2N
A1122-54	1WE	1WE	A2355-47	1N	1N
A1123-35	1S	1S	A2359-15	2C,1G,3N	3N
A1127-58	3N	3N	A2359-23A	1AH	1AH
A1129-53A	1WE	1WE	A2359-23B	1AH	1AH
A1129-62	1WE	1WE			

APPENDIX P

Sources of Photographs

TABLE P1. REFERENCES TO SOURCES OF PHOTOGRAPHS

Code	Sources
A	(J. E. Keeler), <i>Lick Obs. Publ.</i> , VIII , 1908.
B	H. D. Curtis, <i>Lick Obs. Publ.</i> , XIII , Part II, 1918.
C	F. G. Pease, <i>Ap. J.</i> , 46 , 24, 1917 = MWC No. 132.
D	F. G. Pease, <i>Ap. J.</i> , 51 , 276, 1920 = MWC No. 186.
E	C. C. L. Gregory, <i>Helwan Obs. Bull.</i> , No. 22, 219, 1921.
F	G. de Vaucouleurs, <i>Mem. Commonwealth Obs.</i> , No. 13, 1956.
G	G. and A. de Vaucouleurs, <i>Mem. R. A. S.</i> , 68 , 69, 1961.
H	D. S. Evans, <i>Cape Atlas of Southern Galaxies</i> , 1957.
I	D. S. Evans, <i>Vistas in Astronomy</i> , 2 , 1553, 1956.
J	W. W. Morgan and N. U. Mayall, <i>P.A.S.P.</i> , 69 , 291, 1957.
K	W. W. Morgan, <i>P.A.S.P.</i> , 70 , 364, 1958.
L	G. de Vaucouleurs, <i>Handbuch d. Phys.</i> , 53 , 275, 1959.
M	G. de Vaucouleurs, <i>Ap. J.</i> , 127 , 487, 1958.
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R	H. C. Arp, <i>Atlas of Peculiar Galaxies</i> , Calif. Inst. Technology, Pasadena, 1966 = <i>Ap. J. Suppl.</i> , 14 , No. 123, 1966.
S	P. Hodge, <i>Atlas and Catalogue of HII Regions</i> , Univ. of Washington, Seattle, 1966; <i>Ap. J. Suppl.</i> , 18 , No. 157, 1969; 27 , No. 239, 1974.
T	B. T. Lynds, <i>Ap. J. Suppl.</i> , 28 , No. 267, 1974.
U	J. L. Sérsic, <i>Atlas de Galaxias Australes</i> , Córdoba, Argentina, 1968.
V	B. C. Schanberg, <i>Ap. J. Suppl.</i> , 26 , No. 230, 1973.

APPENDIX P. SOURCES OF PHOTOGRAPHS.

N0014	R	N1055	S	N2537A	R	N3344	K	N4051	K
N0023	P	N1058	K	N2545	V	N3346	KS	N4062	P
N0045	LP	N1068	ACKPSR	N2604	R	N3347	U	N4088	PR
N0055	FILU	N1073	PS	N2623	R	N3351	BKLPSTV	N4111	KP
N0067	R	N1079	H	N2633	R	N3354	U	N4124	K
N0067A	R	N1084	LP	N2655	RT	N3358	FU	N4150	P
N0068	R	N1087	EKPST	N2672	R	N3359	PS	N4151	K
N0069	R	N1097	EMIPRTU	N2677	R	N3367	DLPSV	N4152	V
N0070	R	N1097A	HIPR	N2681	CP	N3368	RPSTV	N4178	V
N0071	R	N1143	R	N2683	AR	N3377	P	N4189	V
N0072	R	N1144	R	N2685	PRS	N3379	DV	N4190	S
N0091	R	N1156	P	N2719	K	N3384	DV	N4192	GV
N0127	P	N1186	D	N2719A	K	N3389	ADSV	N4194	R
N0128	P	N1187	F	N2735	R	N3395	DKR	N4204	V
N0134	I	N1201	P	N2735A	R	N3396	DKR	N4206	B
N0145	R	N1229	R	N2775	KP	N3414	R	N4211A	R
N0151	ET	N1232	PHS	N2776	K	N3432	R	N4211B	R
N0157	KPT	N1232A	R	N2782	RT	N3433	K	N4212	B
N0169	RR	N1241	R	N2793	K	N3445	R	N4214	KPS
N0175	P	N1242	R	N2798	R	N3448	RS	N4215	LP
N0185	P	N1249	F	N2799	R	N3486	KS	N4216	BKPV
N0191	R	N1253	R	N2811	P	N3489	K	N4220	BK
N0205	P	N1253A	P	N2830	R	N3504	PS	N4237	PS
N0210	P	N1291	FLU	N2831	R	N3509	R	N4242	S
N0221	ARKPR	N1300	BKPS	N2832	R	N3510	S	N4244	ABLMP
N0224	ARKP	N1302	P	N2835	E	N3511	P	N4254	AKPV
N0253	AMIMPU	N1309	E	N2841	ABC.KMP	N3512	S	N4258	ABMP
N0274	R	N1313	FHLU	N2855	LP	N3521	P	N4262	LP
N0275	R	N1316	HU	N2857	K	N3556	ABMP	N4266	B
N0278	C	N1317	HU	N2859	LP	N3561A	R	N4269	V
N0300	EFHILU	N1326	F	N2872	K	N3561H	R	N4274	HP
N0309	P	N1350	S	N2873	R	N3561C	R	N4278	P
N0375	R	N1365	FHLSU	N2874	R	N3593	A	N4293	PV
N0379	R	N1398	JKP	N2883	U	N3623	ABPRT	N4298	V
N0380	R	N1425	S	N2903	ARPST	N3626	K	N4299	V
N0382	R	N1433	GLU	N2911	R	N3627	APRST	N4302	V
N0383	H	N1448	F	N2914	R	N3628	BRS	N4303	ALPT
N0384	R	N1487	FU	N2916	S	N3631	KR	N4312	B
N0385	R	N1494	F	N2936	R	N3634	V	N4314	PT
N0386	R	N1512	FL	N2937	R	N3646	T	N4321	AKPT
N0388	R	N1515	FHU	N2944	R	N3656	R	N4340	V
N0404	P	N1515A	H	N2950	P	N3664	KR	N4351	V
N0434	H	N1518	EJ	N2968	B	N3665	K	N4370	V
N0434A	H	N1530	B	N2976	C	N3672	P	N4371	V
N0440	H	N1549	U	N2992	R	N3675	B	N4378	P
N0470	R	N1553	LU	N2993	R	N3684	S	N4379	V
N0474	R	N1566	FILU	N2997	U	N3686	S	N4382	V
N0488	KLP	N1569	R	N3003	R	N3690	KR	N4388	B
N0497	R	N1574	F	N3031	ABJLP	N3691	S	N4390	V
N0507	R	N1614	R	N3032	LP	N3705	P	N4394	KPV
N0508	R	N1617	LU	N3034	HLPP	N3718	HLPR	N4402	B
N0520	PR	N1637	P	N3065	P	N3726	AK	N4406	V
N0523	R	N1672	FU	N3067	K	N3738	R	N4410A	V
N0524	P	N1741A	R	N3068A	R	N3745	R	N4410B	V
N0541	R	N1741A	R	N3068H	R	N3746	R	N4414	B
N0545	R	N1784	T	N3077	LPS	N3748	R	N4429	B
N0547	R	N1792	I	N3079	B	N3750	R	N4430	V
N0578	E	N1808	HK	N3081	P	N3751	R	N4433	P
N0598	AP	N1832	P	N3104	R	N3753	R	N4435	RV
N0613	HIUTS	N1875	R	N3109	PS	N3754	R	N4438	RV
N0615	P	N1888	RR	N3115	ACJKP	N3769	R	N4449	CJPS
N0628	AKPS	N1889	RR	N3145	P	N3786	DR	N4450	PV
N0660	S	N1947	FLU	N3147	P	N3788	DR	N4457	P
N0672	JS	N1961	R	N3153	V	N3799	R	N4459	LP
N0678	B	N1964	PS	N3162	K	N3800	R	N4472	R
N0685	F	N2146	ADT	N3169	B	N3808	R	N4485	AR
N0697	B	N2188	I	N3184	S	N3808A	R	N4486	JPR
N0702	R	N2217	P	N3185	P	N3810	JKP	N4490	ABKR
N0718	P	N2276	R	N3187	R	N3898	KP	N4498	V
N0750	PR	N2290	D	N3190	R	N3921	R	N4501	AV
N0751	PR	N2291	D	N3193	R	N3938	K	N4517	R
N0770	R	N2294	D	N3198	A	N3963	K	N4519	V
N0772	R	N2300	R	N3226	AR	N3968	V	N4526	BKP
N0833	R	N2366	P	N3227	AR	N3976	V	N4527	B
N0835	R	N2403	ACPST	N3239	R	N3981	R	N4532	V
N0838	R	N2427	FH	N3245	P	N3991	KR	N4536	AB
N0839	R	N2442	FU	N3253	V	N3992	K	N4540	V
N0891	ARLP	N2444	R	N3255	FU	N3994	P	N4548	PS
N0925	PS	N2445	R	N3290	R	N3995	KR	N4550	V
N0942	R	N2523	LPR	N3303A	R	N3996	S	N4551	V
N0943	R	N2525	P	N3303H	R	N4013	B	N4559	AV
N0972	ACPT	N2532	T	N3310	R	N4026	K	N4561	V
N0986	H	N2535	P	N3319	S	N4027	KR	N4565	ABJLMP
N1023	R	N2536	R	N3329	P	N4038	KR	N4567	BCV
N1024	R	N2537	BKP	N3334	S	N4039	KR	N4568	RCV

APPENDIX P. SOURCES OF PHOTOGRAPHS.

N4569	LPRSV	N5195	ALPRT	N6690	B	N7727	R	A0524-69	LPU
N4579	PT	N5216	U	N6744	FILU	N7741	LPT	A0708-73A	R
N4580	PV	N5218	R	N6753	GLU	N7743	P	A0708-73B	R
N4593	P	N5236	HH[P]	N6769	FHU	N7752	R	A0813-70	PRS
N4594	BCJLPU	N5247	K	N6770	FHU	N7753	R	A0818-16	V
N4595	V	N5248	KP	N6771	FHU	N7757	R	A0825-17	V
N4603	F	N5253	KU	N6814	P	N7764A	GU	A0829-19A	RV
N4603D	U	N5257	DR	N6822	S	N7783	R	A0829-19B	RV
N4606	V	N5258	DR	N6872	FH	N7793	FLSU	A0923-68	R
N4607	V	N5273	KLP	N6876	H	N7805	R	A0936-04A	R
N4608	K	N5278	DR	N6877	H	N7806	R	A0936-04B	R
N4612	P	N5279	DR	N6880	H	N7814	AB	A0936-04C	R
N4616	U	N5360	S	N6893	GL	N7817	B	A0936-04D	R
N4618	P	N5364	PS	N6928	B	N7828	R	A0936-04E	R
N4622	FU	N5365	F	N6943	F	N7829	R	A0936-32A	R
N4622A	U	N5383	CLPT	N694A	ARS	10167	R	A0936-32B	R
N4625	R	N5394	BR	N6951	P	10298A	R	A0940-05	R
N4627	R	N5395	BR	N7013	T	10298B	R	A0941-05	R
N4631	ABJLPR	N5426	ER	N7020	F	10356	R	A1008-04	P
N4633	V	N5427	ER	N7049	U	10563	R	A1023-13	V
N4635	V	N5457	APRS	N7079	GL	10564	R	A1029-54	R
N4636	P	N5474	S	N7090	UL	10601	V	A1033-31	R
N4639	V	N5483	F	N7098	H	10602	V	A1101-41	R
N4643	JKP	N5486	S	N7124	GL	10694	R	A1104-18A	R
N4647	RV	N5490C	R	N7135	G	10701	R	A1104-18B	R
N4649	RV	N5506	B	N7137	T	10755	V	A1107-24A	R
N4650	U	N5529	B	N7144	L	10883	R	A1107-24B	R
N4650A	U	N5544	CDR	N7166	L	10982	R	A1110-22	P
N4650B	U	N5545	CDR	N7177	T	10983	R	A1122-54	R
N4651	KRV	N5560	R	N7184	B	11029	B	A1129-53A	R
N4654	V	N5566	LMPR	N7205	GL	11178	R	A1129-53B	R
N4656	DP	N5569	R	N7213	U	11179	R	A1129-53C	R
N4657	DP	N5613	PR	N7217	ACP	11181	R	A1129-53D	R
N4666	B	N5614	PR	N7236	R	11222	R	A1129-71A	R
N4670	R	N5615	R	N7237	R	11258	R	A1129-71C	R
N4676A	RV	N5643	F	N7252	R	11259	R	A1129-71D	R
N4676B	RV	N5649	R	N7309	E	11559	R	A1129-71E	R
N4684	P	N5665	R	N7314	PR	11563	R	A1144-03A	R
N4688	V	N5665A	R	N7317	R	11613	LP	A1144-03B	R
N4689	V	N5713	KT	N7318A	R	11727	S	A1144-03C	R
N4691	LP	N5746	BCLM	N7318B	R	11954	F	A1202-18A	V
N4697	P	N5820	R	N7319	K	12082	U	A1202-18B	V
N4698	K	N5829	R	N7320	R	12338	R	A1203-09	V
N4699	P	N5850	JKS	N7320C	R	12339	R	A1203-31A	R
N4710	BLPV	N5857	A	N7331	ABKMP	12574	P	A1203-31B	R
N4713	V	N5859	A	N7332	P	13258	V	A1211-16	RV
N4725	APV	N5866	ABCLP	N7392	P	13268	V	A1212-06	V
N4735	V	N5907	BMP	N7393	R	13391	V	A1215-17	V
N4736	ACLPT	N5921	BS	N7418	F	13414	V	A1240-30A	V
N4747	R	N5929	R	N7421	F	13476	V	A1240-30B	V
N4750	P	N5930	P	N7424	FII	13481	R	A1256-09	V
N4753	LP	N5953	R	N7448	R	13483	R	A1302-32	V
N4762	JKP	N5954	R	N7457	LP	13528	V	A1338-54	S
N4775	K	N5962	LP	N7469	R	14526	R	A1446-09	R
N4779	V	N5981	R	N7479	AKT	14662	U	A1600-16A	R
N4781	E	N6015	S	N7496	FU	14710	F	A1600-16B	R
N4793	PV	N6040A	R	N7531	G	14837	U	A1600-16C	R
N4800	P	N6040B	R	N7537	R	14839	U	A1605-55	R
N4809	R	N6045	R	N7547	R	14970	FH	A1614-47	R
N4810	R	N6050	R	N7549	R	14972	H	A1636-42A	R
N4826	ABPT	N6052	KR	N7550	R	14981	H	A1636-42B	R
N4835	H	N6070	C	N7552	GU	15135	G	A1648-45A	R
N4841A	V	N6118	T	N7578A	R	15152	HU	A1648-45B	R
N4841B	V	N6181	PT	N7578B	R	15267	F	A1648-45C	R
N4861	R	N6207	T	N7582	GLU	15273	U	A1648-53A	R
N4866	P	N6215	U	N7585	R	15283	RS	A1648-53B	R
N4922	V	N6217	R	N7590	GU	15328	U	A1648-53C	R
N4933A	R	N6221	FHU	N7599	GU	15328A	U	A1648-53D	R
N4933B	R	N6285	R	N7603	R	15332	F	A1648-53E	R
N4941	P	N6286	R	N7609	R	A0003-41	U	A1648-53F	R
N4945	FU	N6300	FU	N7625	RT	A0004-06A	R	A1712-59A	R
N4976	U	N6340	T	N7640	BP	A0004-06B	R	A1712-59B	R
N4984	K	N6361	P	N7674	P	A0051-73	LU	A1718-49A	R
N5005	BP	N6384	P	N7675	R	A0145-12	R	A1718-49B	R
N5033	B	N6412	R	N7678	R	A0155-02	R	A2233-03	R
N5055	ABP	N6438	U	N7679	R	A0218-39A	R	A2255-04A	R
N5068	S	N6438A	U	N7682	R	A0218-39B	R	A2255-04B	R
N5101	FU	N6503	RST	N7689	G	A0220-41A	R	A2255-04C	R
N5102	FU	N6555	C	N7702	GP	A0220-41B	R	A2331-29	R
N5128	EPRU	N6621	R	N7714	R	A0236-18A	R	A2339-03A	R
N5161	S	N6643	LPS	N7715	R	A0236-18B	R	A2339-03B	R
N5194	AKLPRT	N6684	F	N7723	T	A0255-54	F		

APPENDIX R

Radio Sources Identified with Bright Galaxies

Appendix R. Radio Sources Identified with Bright Galaxies

NCG, IC, or A	3C	4C	PKS/B2*	MSH	Ohio	NRAO	Others	NCG, IC, or A	3C	4C	PKS/B2*	MSH	Ohio	NRAO	Others
N0055			0012-394					N4030			1157-008				
N0157				00-07				N4038/9			1159-18*				
N0193		03.01	0036+03	00+010	OB+062			N4151			1208+39				
N0253			0045-25	00-222				N4234			1215+03	12+004			
N0315			0055+30					N4261	270	06.44	1216+06*	12+005		395	
N0326		26.03	0055+26					N4278			1217+29				
N0383	31	32.05	0104+32		OC+307	053	CTD7 DA35	N4296			1245-41				
N0470				01+003				N4374	272.1	13.47	1222+13*			399	
N0507			0120+33					N4414			1223+31				
N0545/7	40	-01.08	0123-01	01-005		070		N4486	274	12.46	1228+12			401	
N0584			0128-07	01-006				N4490	272						
N0598			0131+30					N4594			1237-11*				
N0612			0131-36	01-311				N4631			1239+32		ON+366		
N0613			0131-29*					N4647			1241+11				
N0703			0149+35					N4696			1246-41	12-405			
N0741/2		05.10	0153+05*					N4734			1248+05				
N0828			0207+38					N4747					ON+282		
N0959		35.03	0229+35					N4760			1250-10				
N1044		08.11	0238+08					N4782/3	278		1251-12*	12-118		412	DN-187,QL58+ SC5.020
N1055			0239+002					N4789							
N1068	71	-00.13	0240-00*	02-014		112		N4793			1252+29				SC4.022
N1084			0243-07*	02-017				N4826			1254+21				
N1097			0244-304*		OD-374			N4827							SC4.043
N1167		34.09	0258+35		OD-397			N4839			1254+27				SC4.051
N1218	78	03.05	0305+03	03+003		124		N4848							SC4.058
N1233		39.11	0309+03				DA94	N4869			1256+28		ON+294	416	SC4.081
N1262		43.46						N4874			1257+28				SC4.085
N1265	83.1	41.06						N4911							SC4.117†
N1275	84	41.07						N4922							SC4.130
N1313			0317-666					N4945			1302-49	13-401			
N1316			0320-37	03-301				N4961							SC4.175
N1365			0331-363					N5005			1308+37				
N1399			0336-35	03-303				N5033			1311+36				
N1417/8			0339-04	03-004				N5090			1318-434				
N1792			0503-38*	05-302				N5098			1317+33				
N1808			0505-375*	05-304				N5107			1319+38				
N2146		78.06						N5127			1321+31				
N2207			0614-21*					N5128			1322-42*	13-402			
N2377	178		0722-09	07+104		262		N5141	36.24		1322+36				
N2484		37.21	0755+37			276		N5194	47.36.1						
N2616			0833-01					N5236			1334-29*	13-205			
N2656		5417			OJ-573			N5395			1356+37				
N2663			0843-33	08-308	OJ-374			N5419			1400-33*		OQ-302		
N2823			0916+34B		OK 327			N5444	35.32		1401+35		OQ+302		
N2903			0929+21*					N5457	54.30.1						
N2964			0935+32B					N5490	17.57		1407+17*		OQ+112A		
N3034	231	69.12						N5532	296	10.39	1414+11*		OQ+124	438	DA361
N3079		55.19						N5793			1456-16*		OQ-194		
N3095			0957-314		OK-397			N5827	26.45						
N3256			1025-436*					N5861					OR-111		
N3343		73.10						N5916					OR-131		
N3504			1100+28					N5920	318.1	07.41				477	
N3521			1103+002*		OM-005			N6047		17.66			OS-106		
N3534			1106+26					N6048		70.19					
N3557			1107-372*					N6051		24.36	1602+24				
N3563			1108+27					N6086			1610+29				
N3583			1111+48					N6109		35.40	1615+35		OS 326.1		
N3621			1115-325		OM-326			N6137			1621+38				
N3627			1117+132*					N6166	338	39.45	1626+39				
N3628			1117+138*					N6240		02.44	1650+024				
N3665			1122+39					N6454		55.33.1					
N3689		25.35	1125+26					N6946		59.31.1					
N3801		17.52			OM 162			N7052			2111+26				
N3813			1138+36					N7237/6	442	13.83	2212+13*			681	
N3862	264	19.40	1142+19*		OM+170	384	CTA51,DA30	N7331			2232+34				
								N7385		11.71	2247+11				
								N7417			2254-65				
								N7501		07.61	2308+57		OZ+015		
								N7503		07.61	2308+07				
								N7552			2313-428*				

NGC, IC, or A	3C	4C	PKS/B2*	MSH	Ohio	NRAO	Others
N7582 N7626 N7720 I0115 I0342	465	26.64 18.06 67.09.1	2315-426* 2318+07 2335+26 0124+18			715	CTD143
I0883 I1065 I1347 I1459 I2082	305	63.21	1318+34 2059-13 2254-367 0427-53	04-504			
I2402 I2476 I4040 I4296 I5063		31.32	0844+31B 0924+30 1333-33* 2048-57	13-303 20-507	OP-356		5C4.108†
I5338 A0034+25 A0206+35 A0209+37 A0220+42	464 66B	20.57 35.03 42.07	0034+25 0206+35 0209+37		OD 311		
A0222+36 A0235-02 A0255+55 A0300+16 A0325+02	75	-02.13 06.15 76.1 16.06 02.10	0222+36 0255+05*	02+010		118	
A0326+39 A0331+39 A0343+70 A0356+10 A0430+05	98 120	39.12 69.05.1 10.12 05.20	0326+39 0331+39 A0356+10* 0430+05*	03+005		137	
A0449-17 A0453-20 A0518-45 A0548-31 A0618-37			0449-17* 0453-20* 0518-45 0548-317 0618-37*	04-117 04-222 OG-382 06-307		152 182	

NGC, IC, or A	3C	4C	PKS/B2*	MSH	Ohio	NRAO	Others
A0718-34 A0722+30 A0910+35 A0915-11 A0943+54	218	54.19.1	0718-34* 0722+30 0910+35 0915-11* 1123-35*	07-307 09-104 11-303	OI-332 OK-126 OM 339	319	CTA47
A1123-35 A1152-55 A1234-72 A1309+21 A1313+07		55.22 21.39 07.32	1234-72 1309+21 1313+07	13+005			DA314
A1346+26 A1358-11 A1407-01 A1422+26 A1427+22		26.42 -01.32 22.41	1346+26 1358-11* 1422+26 1427+22	13-117	OP+278		CTD86
A1514+07 A1602+34 A1610-60 A1652+39 A1717-00	317 353	07.40 39.49 -00.67	1514+07* 1602+34 1610-60.8 1652+39A 1717-00*	15+005 17-006	OR+023	474 524	CTA67, DA37 DA426
A1834+19 A1836+17 A1940+50 A2040-26 A2152-69	386 402	17.81 50.49	1834+19 1836+17* 2040-26* 2152-69	20-212 21-604		574	
A2229+39 A2236+35 A2240+29 A2320+32 A2355+57	449	39.69 47.63	2229+39 2236+35 2240+29 2320+32				DA 613

* Entries also in Culgoora-1 List, Ref. (6).

† CTA55

† log S_R = 0.0, not listed in catalogue.

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APPENDIX S

Galaxies with Supernovae

APPENDIX S. GALAXIES WITH SUPERNOVAE

N0023	1955C	N3221	1961L	N4335	1955E	N5857	1950H	A0123+31	1969J
N0210	1954R	N3254	1941B	N4374	1957B	N5857	1955H	A0149+36	1952A
N0224	1885A	N3310	1974	N4375	1960J	N5861	1971D	A0226+31	1965K
N0253	1940E	N3348	1974	N4382	1960R	N5879	1954C	A0228+39	1973P
N0321	1939D	N3389	1967C	N4410A	1965A	N5905	19630	A0232+37	1961P
N0365	1970N	N3556	1969B	N4414	1974	N5907	1940A	A0234+34	1938A
N0521	1966G	N3561A	1953A	N4424	1895A	N6181	1926B	A0244+37	1963L
N0536	1963N	N3570	1973D	N4453	1966F	N6384	1971L	A0247+00	1959F
N0550	19610	N3574	1973A	N4486	1919A	N6835	1962J	A0814+21	1962F
N0735	1972L	N3627	1974	N4496A	1960F	N6946	1917A	A0817+21	1960D
N0753	1954E	N3631	1964A	N4526	1969E	N6946	1939C	A0823+21	1960N
N0943	1971S	N3631	1965L	N4527	1915A	N6946	1948B	A0911+47	1966A
N1003	1937D	N3656	1963K	N4545	1940D	N6946	1968D	A0942+09	1954Z
N1058	1961V	N3656	1973C	N4559	1941A	N7177	1960L	A0947+34	1965E
N1058	1969L	N3811	1969C	N4564	1961H	N7292	1964H	A0950+36	1963U
N1073	1962L	N3811	1971K	N4621	1939B	N7319	1971P	A1024+20	1964M
N1084	1963P	N3834	1968F	N4632	1946B	N7331	1959D	A1037+27	1965D
N1090	1962K	N3904	1971C	N4636	1939A	N7337	1973	A1045+26	1971U
N1090	1971T	N3913	1963J	N4666	1965H	N7343	1974	A1115+28	1966K
N1275	1968A	N3916	1974	N4674	1907A	N7495	1973	A1115+28	1971A
N1310	1965J	N3938	1961U	N4688	1966B	N7564	1972H	A1123+03	1955G
N1313	1962M	N3938	1964L	N4699	1948A	N7606	1965M	A1133+20	1966D
N1350	1959A	N3947	1972C	N4725	1940B	N7609	1973M	A1137+46	1975
N1365	1957C	N3977	1946A	N4725	1969H	N7619	1970J	A1156+52	1964E
N1482	1937E	N3992	1956A	N4727	1965B	N7634	1972J	A1200+16	1961K
N1654	1962P	N4038	1921A	N4753	1965I	N7768	1968Z	A1201+01	1955F
N2207	1975A	N4038	1974	N4782	1956B	I0043	1973U	A1204+17	1960C
N2276	19620	N4096	1960H	N4874	1968B	I0850	1956D	A1224+48	1960I
N2276	1968V	N4102	1975	N4887	1964D	I1099	1940C	A1248+28	1961D
N2276	1968W	N4129	1954AA	N4921	1959B	I1195	1963Q	A1255+28	1965C
N2403	1954J	N4136	1941C	N4939	1968X	I1703	1963E	A1258+06	1970C
N2535	1901A	N4146	1963D	N4939	1973	I2363	1961B	A1304+28	1962A
N2565	1960M	N4156	1974	N4944	1973F	I3112	1963G	A1307+07	1954H
N2599	1965P	N4157	1954A	N4975	1968	I3476	1970A	A1308+03	1959C
N2608	1920A	N4157	1955A	N4981	1968I	I4051	1950A	A1352+15	1954Y
N2713	1968E	N4162	1965G	N5033	1950C	I4182	1937C	A1401+11	1951B
N2841	1912A	N4165	1971G	N5055	1971I	I4237	1962H	A1402+09	1950F
N2841	1957A	N4178	1963I	N5161	1974B	I4719	1934A	A1420+15	1955K
N2841	1972R	N4183	1968U	N5195	1945A	I4798	1971R	A1520+29	1962B
N2935	1975	N4189	1966E	N5236	1952B	I5342	1961N	A1619+40	1953B
N2968	1970L	N4214	1956A	N5236	1950B	A0022+29A	1968D	A1621+39	1964G
N3003	1961F	N4254	1967H	N5236	1957D	A0022+29B	1968N	A1625+41	1968T
N3074	1965N	N4254	1972D	N5236	1968L	A0025+30A	1972N	A1827+48	1953C
N3147	1972H	N4273	1936A	N5253	1895B	A0029+31	1954D	A2205+04	1953I
N3177	1947A	N4303	1926A	N5253	1972E	A0031+30	1966I	A2207+22	1937B
N3184	1921B	N4303	1961I	N5457	1909A	A0033+10	1964J	A2237+34	1960K
N3184	1921C	N4303	1964F	N5457	1951	A0049+16	1955D	A2312+07	1964K
N3184	1937E	N4321	1901B	N5457	1970G	A0103+31	1960P	A2331+29	1953E
N3198	1966J	N4321	1914A	N5668	1954B	A0107+32	1961M	A2335+31	1953F
N3200	1953D	N4321	1959E	N5668	1952G	A0118+15	1936B	A2338+26	1969K

APPENDIX S. CHRONOLOGICAL LIST OF SUPERNOVAE.

N0224	1885A	A1402+09	1950F	N4375	1960J	A2312+07	1964K	I3476	1970A
N4424	1895A	N5857	1950H	A2237+34	1960L	N3303	1964L	A1258+06	1970C
N5253	1895B	A1401+11	1951B	N7177	1960L	A1024+20	1964M	N5457	1970G
N2535	1901A	N5457	1951	N2565	1960M	N4410A	1965A	N7619	1970J
N4321	1901B	A0149+36	1952A	A0823+21	1960N	N4727	1965B	N2968	1970L
N4674	1907A	N5668	1952G	A0103+31	1960P	A1037+27	1965D	N0365	1970N
N5457	1909A	N3561A	1953A	N4382	1960R	A0947+34	1965E	A1115+28	1971A
N2841	1912A	A1619+40	1953B	I2363	1961B	N4162	1965G	N3904	1971C
N4321	1914A	A1827+48	1953C	A1248+28	1961D	N4666	1965H	N5861	1971D
N4527	1915A	N3200	1953D	N3003	1961F	N4753	1965I	A1165	1971G
N6946	1917A	A2331+29	1953E	N4564	1961H	N1310	1965J	N5055	1971I
N4486	1919A	A2335+31	1953F	N4303	1961I	A0226+31	1965K	N3811	1971K
N2608	1920A	A2205+04	1953I	A1200+16	1961K	N3631	1965L	N6384	1971L
N3184	1921B	N4214	1954A	N3221	1961L	N7606	1965M	N7319	1971P
N4038	1921A	N5668	1954B	A0107+32	1961M	N3074	1965N	I4798	1971R
N3184	1921C	N5879	1954C	I5342	1961N	N2599	1965P	N0943	1971S
N5236	1923A	A0029+31	1954D	A0232+37	1961P	A0911+47	1966A	N1090	1971T
N4303	1926A	N0753	1954E	N0550	1961Q	N4688	1966B	A1045+26	1971U
N6181	1926B	A1307+07	1954H	N3938	1961U	A1133+20	1966D	N3947	1972C
I4719	1934A	N2403	1954J	N1058	1961V	N4189	1966E	N5253	1972E
N4273	1936A	N0210	1954R	A1304+28	1962A	N4453	1966F	N3147	1972H
A0118+15	1936B	A1352+15	1954Y	A1520+29	1962B	N0521	1966G	N7634	1972J
N4157	1937A	A0942+09	1954Z	A0814+21	1962F	A0031+30	1966I	N0735	1972L
A2207+22	1937B	N4129	1954AA	I4237	1962H	N3198	1966J	N7564	1972M
I4182	1937C	N4157	1955A	N6835	1962J	A1115+28	1966K	A0025+30A	1972N
N1003	1937D	N0023	1955C	N1090	1962K	N3389	1967C	N4254	1972O
N1482	1937E	A0049+16	1955D	N1073	1962L	N4254	1967H	N2841	1972R
N3184	1937F	N4335	1955E	N1313	1962M	N1275	1968A	N3574	1973A
A0234+34	1938A	A1201+01	1955F	N1654	1962P	N4874	1968B	N3656	1973C
N4636	1939A	A1123+03	1955G	N2276	1962Q	N6946	1968D	N3570	1973D
N4621	1939B	A1420+15	1955K	A1255+28	1963C	N2713	1968E	N4944	1973F
N6946	1939C	N5857	1955M	N4146	1963D	N3834	1968F	N7609	1973M
N0321	1939D	N3992	1956A	I1703	1963E	N4981	1968I	A0228+39	1973P
N5907	1940A	N4782	1956B	I3112	1963G	N5236	1968L	I0043	1973U
N4725	1940B	I0850	1956D	N4178	1963I	A0022+29B	1968N	N4939	1973
I1099	1940C	N2841	1957A	N3913	1963J	A0022+29A	1968D	N7337	1973
N4545	1940D	N4374	1957B	N3656	1963K	A1625+41	1968T	N7495	1973
N0253	1940E	N1365	1957C	A0244+37	1963L	N4183	1968U	N5161	1974B
N4559	1941A	N5236	1957D	N0536	1963N	N2276	1968V	N3310	1974
N3254	1941B	N1350	1959A	N5905	1963O	N2276	1968W	N3348	1974
N4136	1941C	N4921	1959B	N1084	1963P	N4939	1968X	N3627	1974
N5195	1945A	A1308+03	1959C	I1195	1963Q	N4975	1968	N3916	1974
N3977	1946A	N7331	1959D	A0950+36	1963U	N7768	1968Z	N4038	1974
N4632	1946B	N4321	1959E	N3631	1964A	N3556	1969B	N4156	1974
N3177	1947A	A0247+00	1959F	N4887	1964D	N3811	1969C	N4414	1974
N4699	1948A	A1204+17	1960C	A1156+52	1964E	N4526	1969E	N7343	1974
N6946	1948B	A0817+21	1960D	N4303	1964F	N4725	1969H	N2207	1975A
I4051	1950A	N4496A	1960F	A1621+39	1964G	A0123+31	1969J	N2935	1975
N5236	1950B	N4096	1960H	N7292	1964H	A2338+26	1969K	N4102	1975
N5033	1950C	A1224+48	1960I	A0033+10	1964J	N1058	1969L	A1137+46	1975

APPENDIX T

Hubble-Sandage and Hubble-Holmberg Types

Table T1. Coding of Hubble-Sandage Types

Classes	Type	Code	Type	Code
E	E (0-7)	E 0	E0/S0 ₁	E+0
S0	S0	L	SB0	LB
	S0 ₁	L 1	SB0 ₁	LB1
			SB0 _{1/2}	LB1+
	S0 ₂	L 2	SB0 ₂	LB2
			SB0 _{2/3}	LB2+
	S0 ₃	L 3	SB0 ₃	LB3
	S0 ₃ /Sa(s)	S S0	SB0 ₃ /SBa(s)	SBS0
	S0 ₂ /Sa(r)	S R0	SB0 ₃ /SBa(r)	SBR0
S	Sa ⁺	S 1	SBa(s)	SBS1
			SBa(r)	SBR1
			SBa	SB 1
			Sa/SBa	SX 1
	Sa/Sb	S 2		
	Sb	S 3	SBb(s)	SBS3
			SBb(r)	SBR3
			SBb(rs) or (sr)	SBT3
			SBb(s)/Sb	SXS3
			Sb/SBb	SX 3
	Sc/Sb	S 4		
	Sc	S 5	SBc(s)	SBS5
			SBc(r)	SBR5
			SBc(rs) or (sr)	SBT5
			Sc/SBc	SX 5
	Sc/Irr	S 9		
I	Irr I	I 9	Irr II	I 0
Pec.	(p)	P		

Table T2. Coding of Holmberg (Ho) Types

Type	Code
E	E
S0	L
Sa	S1
Sb ⁻	S3
Sb ⁺	S4
Sc ⁻	S5
Sc ⁺	S6
Ir I	I9
Ir II	I0
S	S.
P	P

APPENDIX T. HUBBLE - SANDAGE AND HUBBLE - HOLMBERG TYPES.

NGC	H-S	Ho	NGC	H-S	Ho	NGC	H-S	Ho	NGC	H-S	Ho	N.I.A	H-S	Ho
N0023	S 3		N2820			N4216	S 3	S3	N4668		19	N7041	L 1-	
N0045	S 5		N2841	S 3	S3	N4224		S1	N4677	L		N7049	E 3	
N0128	L 1 P		N2855	S R0		N4233			N4683	L 1-		N7144	E 1	
N0147		E P	N2859	LR2		N4235		S1	N4684	L 1		N7145	E 0	
N0157	S 5	S5	N2903	S 5	S5	N4236		S6	N4689		S5	N7155	E+2	
N0175	SBS1		N2950	LB1+		N4237	S 3		N4691	I 0		N7168	E+5	
N0185	E P	E P	N2964		S5	N4241		S1	N4696	E 3		N7173	E 1	
N0205	E+ P	E P	N2968		10	N4242			N4697	E 5		N7176	E 2	
N0210	S 3		N2976		S P	N4244	S 5	S6	N4698		S1	N7200	E 4	
N0221		F	N2977		S-	N4246		S5	N4699	S 3		N7200	E 5	
N0224	S 3	S3	N2985		S4	N4248		S-	N4706	E 3		N7213	E 1	
N0247		S6	N3003		S6	N4254	S 5	S5	N4709	E 1		N7217	S 3	S3
N0253	S 5		N3027		S6	N4258	S 3	S4	N4710	L 3		N7232	L 1	
N0309	S 5		N3031	S 3	S3	N4259		L	N4712		S5	N7233	S 05	
N0404	L 3	L	N3032	L 3		N4262	LB2+		N4725	SX 3	S4	N7314	S 5	
N0428		S6	N3034	I 0	10	N4268			N4730	S 3	S3	N7330	S 3	S4
N0488	S 3	S3	N3061		S5	N4270		L	N4743			N7332	L 2 P	
N0520	I 0	10	N3065	L 2		N4273		S5	N4744	LB		N7392	S 3	
N0524	L 2		N3077	I 0	10	N4274	S 1	S1	N4747		S5	N7410	S 4	
N0578		S5	N3079		S5	N4277		S-	N4750	S 3		N7412	S 15	
N0598	S 5	S6	N3081	SX 1		N4278	E 1	S-	N4753	L P		N7418	S 15	
N0615	S 3		N3109	I 9		N4281		L	N4762	L 1		N7421	SBS4	
N0628	S 5	S5	N3115	E+7		N4283		E	N4763	S 5		N7460	SBS5	
N0660		S P	N3136	E 4		N4293	S 1		N4793	S 5		N7457	L 1	
N0672		S6	N3145	S 3		N4294		S5	N4800	S 3		N7496	SBS4	
N0718	S 1		N3147	S 3		N4298		S5	N4826	S 3	S3	N7531	S R1	
N0750	E 0		N3166		S1	N4299		S6	N4866	S 1		N7552	SBS0	
N0751	E 0		N3169		S1	N4301		S6	N4936	E 2		N7582	S	
N0753		S5	N3183		S4	N4302		S-	N4941	S 2		N7590	S 5	
N0772		S4	N3184		S5	N4303	S 5	S5	N5005	S 3	S4	N7599	SBS5	S6
N0784		S6	N3185	SBS1	S1	N4312		S-	N5033			N7640	SBS5	
N0803		S5	N3187		S-	N4314	SBS1P		N5055	S 3	S4	N7702	S 1*	
N0891	S 3	S4	N3190		S1	N4321	S 5	S5	N5101	SBS0		N7741	SBS5	S6
N0908			N3193		F	N4343		S1	N5128	E 0 P	E P	N7743	SBS1	
N0925	SX 5	S6	N3198		S5	N4371		L	N5140	E 3		10239		S5
N0936		S1	N3223	S 3		N4373	E 4		N5161	S 55		10529		S5
N0941		S6	N3241	S 2		N4374		L	N5188	SBS0PS		11459	E 5	
N0972	S 3		N3245	L 1		N4378	S 1		N5191	E+7		11613	I 9	19
N1003		S6	N3250	E 3		N4382		L	N5193A			11727		19
N1023		L	N3257	E 1		N4388		S-	N5194	S 5	S5	11784		S4
N1042		S5	N3258	E 1		N4394	SBS3	S3	N5195	I 0	10	12233		S-
N1052		E	N3260	E 4		N4395	S 9	S6	N5204	S 9	S6	12574	I 9	19
N1055		S4	N3261	SBS5		N4402		S-	N5236	SX 4		13061		S-
N1058		S5	N3267	S 0		N4406	E 3	E	N5248	S 5	S5	13115		S5
N1068	S 3	S3	N3268	E 2		N4410A		S-	N5273	S 50		13266		E
N1073	SBS5		N3269	S 1		N4410B		S-	N5291	L		13259		S5
N1079	RBSR1		N3271	S 1		N4411A		S6	N5292	E 5		13260		L
N1084	S 5		N3273	L		N4411B		S6	N5302	E 5		13267		S5
N1087	S 5	S5	N3275	L		N4417		L	N5304	E 5		13290	L	
N1090		S4	N3281	S 1		N4424		S-	N5328	E 3		13370	E 1	
N1097	SBS3		N3308	E 2		N4425		S-	N5330	E 4		14296	E 1	
N1156	I 9	19	N3309	E 1		N4429		L	N5357	E 3		14299	SBS 1	
N1172	E 1		N3311	L 1		N4433	S 3		N5363			14329	L 1-	
N1199	E 2		N3312	S 2		N4435		L	N5364	S 5	S5	14329A	L 2	
N1201	L 1		N3319		S6	N4438		S1P	N5383	SBS3		14796	E+5	
N1209	E 6		N3329	L 1		N4442		L	N5426		S5	14797	E 6	
N1232	S 5	S5	N3338		S5	N4445		S-	N5427			14827	S 05	
N1300	SBS3	S4	N3344		S5	N4449	I 9	19	N5457	S 5	S5	14831	S 15	
N1302	S 1		N3351	SBS3	S4	N4450	S 3	S3	N5474		S6	14837	S 55	
N1316	E 4P		N3359	SBS5	S5	N4457	S 1		N5566	SBS1		14839	S 15	
N1317	E+2		N3364		S5	N4459	L 3		N5585		S6	14842	L 1	
N1325		S4	N3367	SBS5		N4472		E	N5614	S 1		14845	E 05	
N1325A		S5	N3368	S 1	S1	N4480		S5	N5740		S4	14889	E 5	
N1326	PLB		N3377	E 6		N4485		S6	N5746		S3	14960	L	
N1337		S6	N3423		S6	N4486		S6	N5774		S5	14961	E 5	
N1398	SBS3		N3432		S6	N4497	E 0 P	E	N5775		S5	14970	E	
N1399	E 1		N3486		S5	N4496A		S6	N5846			15063	E 4	
N1512	SBS1		N3504	SX53		N4496B		S6	N5850		S4	15181	L 1	
N1515	S 1		N3511	S 5		N4501		S4	N5866	L 3		15267	S 0	
N1533	E+4		N3521	S 3	S3	N4517		S5	N5898	E 0		15273	L	
N1536	SBS 1P*		N3556	S 5	S6	N4517A		S6	N5903	E 3		15269	SBS5	
N1543	RLB		N3557	E 3		N4519		S5	N5907	S 5	S4	A0524-69	I 9	
N1546			N3557B	E 6		N4524		S5	N5942	S 5		A0813-70	I 9	19
N1549	E 2		N3564	L 1		N4527	L 3	S3	N6015		S6	A0909-74		S6
N1553	L 2		N3568	S 3		N4532		19	N6181	S 5		A0936-71		19
N1559	SBS5		N3623	S 1	S1	N4535		S5	N6384	SX 3	S4	A0956-30		19
N1560		S6	N3627	S 3	S4	N4536		S5	N6412		S5	A0957-05		19
N1566	S 15		N3628		S4	N4539		S1	N6503	S 5	S5	A1005-12		E P
N1569		19	N3631		S5	N4548	SBS3	E	N6643		S5	A1008-04	I 9	19
N1574	E 4		N3642		S5	N4559		S6	N6684	LB		A1027-35A	L 1-	
N1596	L		N3646		S5	N4564		S-	N6707			A1027-35B	E 3	
N1617	S 51		N3672	S 5		N4565	S 3	S4	N6708	E+3		A1033-27	E 2	
N1637	S 5	S5	N3705	S 3		N4567		S5	N6721	E 2		A1034-27A	E 7	
N1672	SBS3		N3718	L P	L P	N4568		S5	N6753	S 1		A1034-27B	L	
N1688	SBS5		N3726		S5	N4569	S 3	S4	N6758	E 1		A1110-22	E P	E P
N1703	S 5		N3729		S5	N4571		S6	N6769	S 4		A1232-06		19
N1705	P		N3738		19	N4576		S4	N6770	S 4P		A1246-41A	L	
N1784		S5	N3756		S5	N4579	SBS 3	S3	N6771	L 1		A1246-41B	L	
N1832	S 3		N3810	S 5	S5	N4580	S 3		N6776	E 1		A1246-41C	E 4	
N1947	L 2		N3898	S 1		N4586		S1	N6780	S R4		A1247-41	E 5	
N1961		S4	N3938		S5	N4593	SBS3		N6782	S 0*		A1248-40	E 0	
N1964	S 3	S4	N3953		S4	N4594	S 2	S1	N6814	S 3		A1249-41	E 5	
N2146		S P	N3992		S4	N4596			N6822		19	A1311-35		19
N2217	SBS1		N4036		L	N4606		S1	N6851	E 5		A1332-33	L	
N2268		S5	N4041		S5	N4607		S-	N6861	E 6		A1335-33	E 6	
N2276		S6	N4051		S4	N4608		L	N68610	L 1		A1338-54		S5
N2300		E	N4062	S 3		N4612	LB1		N6868	E 3		A1345-30	L	
N2336		S5	N4085		S5	N4618		S6	N6870	L 1		A1352-54		S-
N2366	I 9	19	N4088	SX 5	S5	N4625		S6	N6872	S 5P		A1515-23	E 5	
N2403	S 5	S6	N4096		S6	N4627		S-	N6875	L 1-		A1852-54	E 3	
N2434	E 0		N4111	L 2		N4631	S 5	S6	N6876	E 4		A1903-31	L 1	
N2500		S6	N4116		S6	N4633		S6	N6877	E 5		A2011-65	E 1	
N2523	SBS3		N4123		S6	N4634		S-	N6878	S 5		A2020-44	L 1	
N2525	SBS5	S5	N4150	L 1		N4636	E+0		N6880	L 1		A2100-48	E 4	
N2541		S6	N4165		S5	N4639		S4	N6890	S 3		A2101-48	E 1	
N2655		S1	N4168		E	N4643	SBS0		N6893	E+3		A2102-47	S 05	
N2681	S 1		N4178		S6	N4645		S-	N6902	SBS 15		A2103-47	E 5	
N2683		S3	N4189		S5	N4647		S1	N6909	E 5		A2207-46	S 5	
N2685	L P	L P	N4192		S4	N4649		E	N6946		S5	A2326-14		19
N2715		S5	N4193		S4	N4651		S5	N6951	SX53	S4	A2359-15		19
N2763		S5	N4206		S5	N4653		S5	N6970	S 55				
N2775	S 1		N4212		S5	N4654		S5	N7014	E 5				
N2805		S6	N4214	I 9	19	N4656	I 9	19	N7029	E 5				
N2811	S 1		N4215	L 2		N4666		S5	N7038	S 55				

APPENDIX V

Sources of Optical and Radio Radial Velocities

Table V1. Coding of Sources of Optical Radial Velocities (1964-1975)

Code	Source	References
B1	Mt. Wilson	Brandt 1965.
B2	Mt. Wilson	Rudnicki 1969.
D2	Lick 2	Hodge and Marchant 1966.
E1	McDonald 1	Page 1970.
F1	McDonald 2	Burbidge and Burbidge 1963-1968; Burbidge <i>et al.</i> 1964-1967.
F2	McDonald 2	Burbidge <i>et al.</i> 1964a, b; Rubin <i>et al.</i> 1964, a, b, c; 1965a, b.
G1	McDonald 3	G. and A. de Vaucouleurs 1967.
G2	McDonald 4	G. and A. de Vaucouleurs 1975.
J1	Hte Provence	Duflot 1965.
J2	Hte Provence	Demoulin 1965a, b.
J3	Hte Provence	Carozzi <i>et al.</i> 1974a, b; Bottinelli <i>et al.</i> 1975.
K1	Mt. Palomar	Gates <i>et al.</i> 1967.
	Mt. Palomar	Zwicky 1964-1971.
K2	Mt. Palomar	Arp 1965-1973; Arp and Bertola 1970; Arp and Khachikian 1973; 1974a, b; Arp <i>et al.</i> 1974; Khachikian 1973; Khachikian <i>et al.</i> 1974.
K3	Mt. Palomar	Bracesi <i>et al.</i> 1972; Burbidge and Sargent 1971; Huchra and Sargent 1973; Kowal <i>et al.</i> 1974; Kormendy and Sargent 1974; Sargent 1968-1974; Shields <i>et al.</i> 1972; Spinrad <i>et al.</i> 1971, 1973.
K4	Mt. Palomar	van der Kruit 1973, 1974a, b.
K5	Mt. Palomar	Barbieri <i>et al.</i> 1974; Bertola 1972; Bertola <i>et al.</i> 1973.
K6	Mt. Palomar	Minkowski 1963; Peterson 1970; Schmidt 1965.
K7	Mt. Palomar	Sandage 1966-1975; Sandage and Tammann 1974, 1975.
K8	Mt. Palomar	Kowal and Sargent 1971.
K9	Mt. Palomar	van den Bergh 1969.
L1	Mt. Stromlo	Disney 1973, 1974; Disney and Rodgers 1973; Searle and Bolton 1968; Vidal and Peterson 1975; Westerlund and Wall 1969; White-oak 1972.
L2	Mt. Stromlo	Freeman 1972, 1974; Freeman and de Vaucouleurs 1974; Rodgers and Freeman 1970.
L3	Mt. Stromlo	Sandage 1972, 1975.
L4	ESO	Danziger and Schuster 1974.

Code	Source	References
M1	Radcliffe	Catchpole <i>et al.</i> 1969; Evans 1967; Evans and Malin 1965.
M2	Radcliffe	Allen 1974; Tritton 1972.
M3	RGO	Tritton 1972, 1973.
N1	Córdoba	Page 1967.
N2	Córdoba	Carranza 1967; Dottori and Fourcade 1973; Pastoriza and Agüero 1971; Sérsic 1966, 1969; Sérsic <i>et al.</i> 1968-1972.
N3	Córdoba	G. and A. de Vaucouleurs 1973.
O1	Lick 3	Arp <i>et al.</i> 1971; Burbidge 1964-1970; Burbidge and Burbidge 1964, 1965; Burbidge <i>et al.</i> 1971-1972.
O3	Lick 3	Burbidge and Demoulin 1969a, b; Demoulin 1969-1970; Demoulin <i>et al.</i> 1968-1970.
O4	Lick 3	Chincarini and Walker 1967a, b; Kinman 1965; Walker and Chincarini 1967, 1968.
O5	Lick 3	Anderson 1973, 1974; Anderson and Kraft 1969; O'Connell and Kraft 1972.
O6	Lick 3	Spinrad <i>et al.</i> 1974.
P1	Hte Provence	Deharveng and Pellet 1969, 1970.
P2	Hte Provence	Boulesteix <i>et al.</i> 1970; Carranza <i>et al.</i> 1968, 1969; Crillon and Monnet 1969a, b.
P3	Mt. Palomar	Deharveng 1971.
P4	Córdoba	Carranza and Agüero 1974; Sérsic and Carranza 1969.
P5	KPNO	Tully 1972, 1974.
Q1	Kyoto	Karoji and Kodaira 1972; Sakka <i>et al.</i> 1973.
Q2	Asiago	Barbon and Capaccioli 1974; Bertola 1965, 1966.
S1	Cerro Tololo	Kunkel and Bradt 1971; Osmer <i>et al.</i> 1974a, b.
S2	Cerro Tololo	Burbidge and Burbidge 1972a, b.
S3	Cerro Tololo	Graham 1974; Graham and Rubin 1973; Rubin 1974.
S4	KPNO	Chincarini and Rood 1971, 1972a, b, c; Chromey 1973, 1974a, b; Danziger <i>et al.</i> 1972; Simkin 1972; Theys <i>et al.</i> 1972; Welch and Wallerstein 1969.
S5	KPNO	Kintner 1971.
S6	KPNO	Barbon 1969a, b; Bautz 1972; Goad 1974; Hodge 1974; Jenner 1974; Lynds 1971; Stockton 1972.
S7	KPNO	Dupuy 1968, 1970; Dupuy and de Veny 1969; Khachikian 1972, 1973.
S8	Cerro Tololo	Welch <i>et al.</i> 1975.
S9	Hawai	Stockton 1974a, b.

Code	Source	References
T1	DTM	Bertola <i>et al.</i> 1969; Ford <i>et al.</i> 1968.
T2	DTM	D'Odorico 1970; Ford and Rubin 1968, 1971; Rubin and Ford 1967-1971; Rubin <i>et al.</i> 1967, 1970.
T3	DTM	Ford 1969.
T4	DTM	Rubin and Ford 1975.
U1	McDonald 5	Ulrich 1972, 1973.
U2	McDonald 6	Ulrich 1971, 1975.
U3	McDonald 5	Weedman 1970; Weedman and Khachikian 1968, 1969.
U4	McDonald 6	Chincarini and Martins 1975; Kazarian and Khachikian 1974; Khachikian and Weedman 1971, 1974; Weedman 1972.
U5	McDonald 5	Fairall 1970, 1971; Fairall and Angione 1969.
U6	KPNO	Ulrich 1973, 1975.
U7	McDonald 5	Wills 1967.
U8	McDonald 6	Wills and Wills 1974, 1975.
U9	McDonald 6	Ulrich 1975a, b.
V1	Mt. Palomar	Morton and Chevalier 1972, 1973.
V2	McDonald	de Vaucouleurs 1967.
V3	Cerro Tololo	Bohuski <i>et al.</i> 1972.
V4	KPNO	Simkin 1972.
X1	Dearborn	Heckathorn 1972.
X2	Steward	Burbidge <i>et al.</i> 1972; Strittmatter <i>et al.</i> 1974.
X3	Steward	Disney and Cromwell 1971; Gregory and Connolly 1973.
X4	Steward	Tifft 1972, 1973; Tifft <i>et al.</i> 1971, 1973a, b.
Z1	Byurakan	Arakelian 1973; Arakelian <i>et al.</i> 1970-1973; Dibai <i>et al.</i> 1968; Notni <i>et al.</i> 1973.
Z2	Alma-Ata	Denisjuk 1971, 1974; Denisjuk <i>et al.</i> 1974a, b.
Z3	Crimea	Borchkhadze 1974; Kopilov <i>et al.</i> 1973, 1974.

Table V2. Coding of Sources of Radio Redshifts (1964-1975)

Code	Source	References
R1	NRAO	Burns and Roberts 1971; Ford, Rubin, and Roberts 1971; Gottesman and Wright 1973; Gordon 1971; Gordon <i>et al.</i> 1968; Hoglund and Roberts 1965; Margon <i>et al.</i> 1972; Peterson and Shostak 1974; Roberts 1965-1972; Roberts and Warren 1970; Roberts, Thonnard, and Rubin 1975; Shostak 1974a, 1975; Whitehurst and Roberts 1972.
R2	Nançay	Allen 1970; Allen <i>et al.</i> 1971; Balkowski <i>et al.</i> 1972, 1973a, b, 1974; Bottinelli and Gougenheim 1973, 1975; Bottinelli <i>et al.</i> 1970-1975; Carrozi <i>et al.</i> 1974; Chamaraux <i>et al.</i> 1970; Durand 1975; Gougenheim 1969; Guélin and Weliachew 1969, 1970a, b; Huchmeier 1972, 1973a, b, c; Lauqué 1973; Weliachew 1969.
R3	Owens Valley	Gottesman and Weliachew 1972; Rogstad 1971; Rogstad <i>et al.</i> 1967, 1974; Rogstad and Shostak 1972, 1973; Seilstad and Whiteoak 1965; Seilstad and Wright 1973; Shostak 1974b; Shostak and Rogstad 1973; Shostak and Weliachew 1971; Weliachew 1971, 1973, 1974; Weliachew and Gottesman 1973; Wright 1974; Wright and Seilstad 1973.
R4	Jodrell Bank	Beale and Davies 1969; Davies 1973; Davies and Lewis 1973; Dean and Davies 1975; Gottesman <i>et al.</i> 1966; Gottesman and Davies 1970; de Jager and Davies 1971; Lewis and Davies 1973; McCutcheon and Davies 1970.
R5	Parkes	van Damme 1966; Lewis 1968-1974; Mathewson <i>et al.</i> 1975; Robinson and van Damme 1966; Robinson and Koehler 1965; Robinson and Lewis 1973; Shobbrook and Robinson 1967; Whiteoak and Gardner 1974.
R6	NRAO	Fisher and Tully 1975.
R7	Ohio	Brundage and Kraus 1966; Meng and Kraus 1966.
R8	Cambridge	Emerson 1974; Warner <i>et al.</i> 1973.
R9	Westerbork	Allen <i>et al.</i> 1974; Sancisi 1974.

APPENDIX V. SOURCES OF OPTICAL AND RADIO VELOCITIES.

N0012	R1T4	N0514	B C R2	N1058	G1K1R4	N1400	B	N2300	B C
N0016	B	N0519	K1	N1067	T4	N1401	S8	N2314	B C
N0023	B	N0520	C D K2R1R4	N1068	A B C F J J1	N1404	B D	N2329	K6
N0024	G1R2	N0521	K7	N1068	04R2R4	N1406	S8	N2336	C R2
N0036	K7	N0523	S4	N1073	T2R1	N1407	B	N2339	B R2
N0045	B R3R4R5R6	N0524	B	N1079	B	N1410	K3	N2344	G1R2
N0055	H N2R R3R5	N0530	K1	N1080	R1T4	N1411	M1S8	N2347	C
N0067	K3	N0533	G1	N1084	B F R2	N1415	B	N2366	G1R2R4R6
N0067A	K3	N0535	K1	N1085	B	N1417	B	N2369	N3
N0068	B K3X4	N0536	Q2	N1087	B	N1421	G1	N2377	01
N0069	B K3	N0538	K1	N1094	K7	N1425	S8	N2379	B
N0070	K3X4	N0539	T4	N1097	B C F	N1426	B	N2389	C
N0071	B K3	N0541	K1	N1140	B R1	N1427	D	N2397	L3M3
N0072	B K3	N0543	K1	N1156	B R1	N1428	S8	N2403	B P1R R1R2R3
N0072A	B	N0545	G1K1	N1167	K3	N1433	H	N2403	R3
N00768	Z3	N0547	G1K1	N1172	L3	N1437	S8	N2415	D R2
N0080	B	N0548	K1	N1187	C R2	N1439	B	N2417	T4
N0083	B	N0558	K1	N1199	B	N1441	B	N2434	N1
N0091	T4	N0560	B K1	N1201	B	N1448	L3S8	N2441	C
N0095	G1	N0562	R1T4	N1209	B F1	N1449	B	N2442	N2
N0099	K7	N0564	B K1	N1218	K6	N1451	B	N2444	F
N0105	K7	N0565	K1	N1222	Z3	N1453	B C F1	N2460	B
N0125	B	N0570	K1	N1224	S4	N1482	S8	N2466	N3
N0126	D2	N0578	C R2	N1229	K2	N1483	S8	N2475	C
N0127	B	N0584	A B	N1232	C G1	N1487	S8	N2484	01U2
N0128	B F1	N0596	B	N1232A	S8	N1493	S8	N2495	Z1
N0130	D2	N0598	B B1P2R R1R2	N1233	U7	N1494	S8	N2500	C R2
N0134A	C	N0598	R4R4R7R8	N1290	S4	N1507	G1	N2512	C
N0145	G1Z2	N0612	L1	N1253	R1	N1510	L1S8	N2514	R1T4
N0148	G1	N0613	C F2R2	N1255	G1	N1511	N1	N2523	C
N0151	G1	N0615	D	N1260	S4	N1512	H	N2525	C R2
N0157	B F R2	N0622	Z3	N1265	S4	N1515	L3	N2532	B R2
N0160	B	N0628	B P3R R2R3R4	N1267	S4	N1518	C R2	N2534	K3
N0165	R1T4	N0636	B	N1268	S4	N1521	B	N2535	E1K2R1R1R2T2
N0169	Z1	N0646	NA	N1270	B	N1527	N1	N2536	E1K2
N0173	K7R1T4	N0658	K7	N1271	S4	N1531	N2	N2537	B C D Z1Z2
N0180	K7	N0664	K7	N1272	D	N1532	R2S8	N2541	G1R1R2
N0182	B K7	N0672	C R1R3	N1273	B	N1533	L3	N2544	K3Z2
N0185	B C D	N0673	K7	N1274	D	N1536	N1	N2545	S4
N0190	S4	N0681	B D 01	N1275	B 01	N1537	S8	N2549	B
N0193	U7	N0694	K3Z1	N1277	B	N1543	L	N2551	C
N0194	B	N0703	U2	N1278	B	N1546	L3	N2552	R2
N0200	K7	N0706	K7	N1281	S4	N1549	L M	N2554	S4
N0205	B C	N0708	K6	N1282	S4	N1553	H L	N2557	S5
N0210	C	N0718	C	N1283	S4	N1559	M1N2	N2560	S5
N0214	B C R2	N0720	B	N1288	S8	N1560	R4	N2562	B
N0216	R2S7	N0736	B	N1291	H M R5	N1566	H L M1	N2563	B K4
N0221	A B C	N0741	B	N1292	S8	N1569	B C R1R3	N2565	S4S4X4
N0224	A B C P1R R1	N0742	K3	N1293	S4	N1574	L	N2577	S5
N0224	R1R4R4R4R7T2	N0750	B	N1294	S4	N1587	B	N2582	S4T4
N0227	B	N0751	B	N1297	L3	N1588	K3	N2595	K3S4S6
N0244	D R2S7	N0753	C R2	N1298	01	N1590	K3	N2599	K3S4
N0245	Z3	N0770	K2	N1300	C R2	N1596	L3	N2601	N3
N0247	B R R4R5	N0772	B K2R1R4	N1305	D K	N1600	B	N2608	B
N0253	F 03R2R5	N0779	G1	N1309	G1	N1601	B	N2613	B C R2
N0255	C	N0788	B	N1310	S8	N1614	GIU1	N2623	B
N0257	K7	N0821	B	N1313	L4P4R5	N1617	L3	N2625	Z2
N0262	Z1	N0828	U2	N1315	S8	N1625	G1	N2633	C
N0274	D L2	N0840	K7	N1316	B H M F1S8	N1637	B R1R2T2	N2639	B
N0275	D L2R1R1Z2	N0851	Z3	N1316C	S8	N1640	C	N2642	C
N0278	A B C R2	N0858	T4	N1317	B	N1654	Q2	N2646	C
N0279	Z3	N0863	Z3	N1319	S8	N1659	G1	N2654	B
N0289	C	N0864	C R2	N1320	Z3	N1667	L3	N2655	B F1R4
N0300	R R R3R5	N0871	C D R2	N1325	L3S8	N1672	L3N2S1	N2656	M3U8
N0315	U2	N0877	C	N1326	L3R2S8	N1688	L3	N2663	L1M2S2
N0321	K3	N0890	B	N1326B	S8	N1700	B	N2672	B
N0326	K3U2	N0891	R2R9	N1331	C	N1705	L2L3N1	N2673	B
N0337	G1	N0895	G1R1	N1332	B C	N1741	R1	N2676	R2
N0337A	D	N0899	K2	N1337	R1	N1741A	G1	N2681	B C
N0354	K3Z1	N0906	T4	N1339	S8	N1741R	G1	N2683	B C D R1T2
N0357	B	N0907	K2	N1341	S8	N1744	C R2	N2685	R D F1J2R1R2
N0375	B	N0908	C R2	N1344	M1S8	N1784	G1R1R2T2	N2691	J3R2Z1
N0379	B	N0910	K6	N1345	R2S7	N1792	F2G1	N2693	B
N0380	B	N0918	R1T4	N1350	D K	N1796	N1	N2694	B
N0382	B	N0925	C F2R1R2R3R4	N1351	D	N1808	F1K2N2R2	N2701	R2
N0383	B	N0926	K7	N1353	S8	N1832	B F1R2	N2712	B
N0384	B	N0927	R1T4	N1359	C	N1879	R6	N2713	L3T2
N0385	B	N0936	A B	N1365	D F H	N1888	C	N2715	C
N0386	B	N0949	Z2	N1366	S8	N1889	B C V1	N2716	B
N0388	B	N0954	T4	N1371	S8	N1947	L1N1	N2719	E1
N0404	A B D F1	N0958	G1R2	N1374	D	N1961	C R2	N2719A	E1
N0418	T4	N0972	B D F1J2	N1375	S8	N1964	C R2	N2723	R
N0428	C R1R2	N0985	G2	N1376	K7R1	N2082	N3	N2726	K3
N0434	M1	N0986	M	N1379	D	N2090	R2	N2732	C
N0440	M1	N0991	K7	N1380	B D	N2139	C R2	N2735	K1
N0449	U3Z2	N1003	B R1	N1380A	S8	N2146	B C F R2	N2735A	K1
N0450	R1	N1019	K7	N1380B	S8	N2146	B C F R2	N2742	G1
N0467	G1	N1022	G1	N1381	D	N2196	G1	N2744	B
N0470	G1	N1023	B D R1R2	N1385	C R2	N2207	B	N2748	C
N0474	B	N1035	G1	N1386	S8	N2217	B C	N2749	B F1
N0488	B	N1036	J3K3R2Z1	N1387	D	N2227	T4	N2752	S4
N0495	B	N1042	R1	N1389	D	N2268	C	N2763	R1
N0497	K1K7	N1044	M2	N1395	B C	N2273	Z2	N2768	B
N0499	B	N1052	B C F1X3	N1398	C	N2276	C R1	N2775	R
N0507	B	N1055	R2	N1399	B D L1S8	N2280	L3R2	N2776	C R2R4

APPENDIX V. SOURCES OF OPTICAL AND RADIO VELOCITIES.

N2782	R J J101R2	N3166	B	N3504	B F	N3928	K371	N4283	A E1
N2784	C	N3169	A C R2	N3509	F	N3938	C R1T2	N4288	R6
N2787	B C	N3177	A	N3510	C R2	N3941	B C	N4291	B C
N2788	N3	N3184	B C R1R4	N3511	G1	N3945	B	N4293	C R4
N2793	G1	N3185	B	N3512	C	N3949	B	N4294	D
N2798	R1	N3187	G1	N3516	B C R2S5	N3953	B C	N4295	S4
N2799	A	N3188	K322	N3521	A B F1R2	N3955	L154	N4299	T2
N2805	C R1T2	N3188A	K322	N3550	K56	N3962	B F1	N4299	D
N2811	B	N3190	B C	N3556	B C F R1R1R2	N3963	K7	N4303	B R4R4R5U3
N2814	F1	N3191	K7	N3556	R3	N3977	K3	N4308	S4
N2815	L3	N3193	A	N3557	L3	N3990	C	N4310	S4
N2820	E1E1	N3198	C R1R2	N3557B	L3	N3991	D E1	N4314	R
N2823	U2	N3202	K7	N3558	Z1	N3992	B	N4319	K2
N2824	Z1	N3202	G1R1	N3561A	K 56	N3993	E1	N4321	B K4R2R4R5
N2831	H	N3208	T4	N3561B	K 56	N3994	E1	N4324	B
N2832	B	N3222	B	N3563	U6	N3995	C E1E1	N4339	B
N2835	C R2	N3223	L3M1	N3564	L3	N3997	E1	N4350	B
N2841	A B C R1R2	N3226	B FIT2	N3568	L3	N3998	B C F103X3	N4351	S4
N2855	A F1	N3227	A J1R2R4T2	N3583	M3	N4004	Z1Z2	N4365	H C
N2857	R1T4	N3239	C	N3585	B	N4026	B	N4369	S4Z1Z2
N2859	A	N3241	L3	N3593	F103	N4027	D G1V2	N4371	G1
N2865	B	N3245	A	N3596	K7R2	N4030	C	N4373	L3
N2872	E1	N3250	L3	N3605	B	N4036	B	N4374	B F1R4
N2874	E1	N3253	R1T4	N3607	B C	N4038	B E1F1R1T2	N4375	K154
N2880	A	N3254	B	N3608	B	N4039	B E1F1T2	N4377	K3
N2889	L3	N3256	H M2N2	N3610	B	N4041	G1	N4382	B
N2893	J3R2Z1	N3257	L3	N3611	B	N4051	G1J J1R2R4B	N4384	Z1
N2903	R C F R1R2J3	N3258	L3	N3613	B	N4062	S4	N4385	U3
N2911	A F1X3	N3259	C	N3619	B	N4064	C	N4386	C
N2914	A	N3260	L3	N3621	M1R2	N4088	C D	N4387	H
N2915	L2N3	N3261	L3	N3623	A R F	N4096	Q2R2	N4388	T2
N2935	L3	N3267	L3	N3626	B	N4102	B C	N4394	B
N2936	K2L2P54	N3268	L3	N3627	A R D R2	N4104	S4	N4395	C
N2937	K2L2P54S5	N3269	L3	N3628	C R1	N4105	B	N4406	A C
N2942	R1T4	N3271	L3	N3629	R1	N4106	B	N4410	S6
N2944	J3	N3273	L3	N3630	S4	N4111	A B C	N4414	B
N2950	A C	N3275	L3	N3631	C R1T2	N4116	C R5	N4421	B
N2957A	K322	N3277	B	N3640	B	N4125	B C F1	N4424	S6
N2962	S4	N3281	L3	N3642	B	N4128	C	N4425	B
N2963	K322	N3290	S4	N3646	C F	N4131	S4	N4429	B
N2964	A Z1Z2	N3294	C R2	N3656	S5	N4132	S4	N4433	K254
N2967	C	N3301	B	N3664	G1R6	N4136	B	N4435	B
N2968	G1	N3303A	K255	N3665	B	N4138	B	N4438	B F1
N2974	F1R	N3303B	K255	N3672	C	N4143	B	N4442	B
N2976	C	N3305	L1	N3675	B D	N4144	R1	N4448	B
N2983	H	N3308	L1L3	N3681	B	N4145	S4	N4449	A B R P2R2R3
N2985	B	N3309	L1L3	N3684	B	N4148	B2	N4449	V2
N2986	B	N3310	B C J104Q2R1	N3686	B	N4150	B	N4450	H
N2989	L3	N3310	R2	N3689	U7	N4151	ABCJJ10505R2	N4457	G1
N2992	X2	N3311	K6L1L3	N3690	G1K3U2U4	N4151	R2R4R4T1U1U3	N4458	R
N2993	X2	N3312	D L1L3	N3718	B R1R1R2R4	N4156	T4	N4459	B
N2997	N2R2	N3314	L1	N3725	U7	N4157	K3R256	N4461	B
N3003	B	N3316	D L1	N3726	B R1	N4162	C	N4464	B
N3011	Z1Z2	N3318	N1	N3737	K6	N4169	S4	N4467	B
N3021	G1	N3319	C R1R1R2	N3745	K3	N4174	S4	N4472	A B D X3
N3027	C R2	N3320	R1	N3746	K3	N4175	S4	N4473	B V1
N3031	A B C K R R1	N3329	S4	N3748	K3	N4178	C R4	N4474	B
N3031	T256	N3338	C R2	N3750	K3	N4179	B	N4475	R1T4
N3032	R	N3344	B R1R2	N3751	K3	N4183	R1	N4477	R
N3034	A B C F2J1R2	N3348	B	N3753	K3	N4189	K8R1	N4478	R
N3034	R3T1V2X1	N3351	D T2	N3754	K3	N4192	B R4	N4479	B
N3041	R2	N3353	S7U3	N3756	K7	N4194	C K203R1R2Z1	N4485	E1
N3044	G1V2	N3359	C R1R3	N3769	E1	N4196	S4	N4486	B C D K656X3
N3052	K7	N3367	B R2	N3769A	E1	N4203	B	N4486B	B K1
N3054	G1	N3368	A B D R2R4	N3780	K7	N4211A	K S4	N4487	R1
N3055	C	N3370	C	N3783	N351	N4211A	C S4	N4490	A E1P2Q2R2R3
N3057	R6	N3377	C	N3786	E1	N4212	C	N4490	R4R4
N3059	N1N3	N3377A	R6	N3788	E1	N4214	A B C R R3	N4492	B
N3065	C F1	N3379	B D	N3799	E1	N4216	B C R4	N4494	B C V1
N3066	C U2U4	N3384	B D	N3800	E1	N4217	R2	N4496A	D G1
N3067	A S4	N3389	C T2	N3801	U7	N4218	S7	N4500	Z1
N3068A	K	N3395	C E1R1R1T2	N3808	K2	N4220	B	N4501	R R4
N3068B	K	N3396	C E1T2	N3808A	K2	N4227	B2	N4504	R1
N3073	K3	N3403	C	N3810	B C X2	N4234	D	N4517	C R1
N3074	K3T4R1	N3407	U8	N3811	K3Z1	N4236	C R3R3	N4519	C
N3077	K503R1R4	N3408	K7	N3813	S4	N4242	D	N4523	R6
N3078	B O3X3	N3412	B	N3818	B	N4244	C R R2R3	N4525	S4
N3079	C	N3414	B	N3842	K6	N4245	B	N4526	B R4
N3104	G1R2	N3419	C	N3862	K2K6	N4246	R1T4	N4527	R5
N3109	C R R2R3R4R5	N3423	R1	N3870	K3R2U2Z1	N4251	H	N4532	G1
N3109	R6	N3430	C R1T2	N3872	B	N4254	B C R4	N4535	H C R4R5U3
N3115	A B D R2R4S4	N3432	C G2R1	N3877	K7	N4256	C	N4536	C R5
N3115	V1V2	N3437	K7	N3887	C	N4258	A B F G1J1K4	N4546	B
N3124	L3	N3442	Z1Z2	N3888	K3Z1	N4258	O4R3	N4548	A R4
N3136	H1	N3445	G1	N3893	B C R1T2	N4260	D	N4550	B
N3140	T4	N3447	D R1T2	N3894	U8	N4261	B	N4551	B
N3145	C	N3447A	D	N3897	R1T4	N4262	G1	N4552	R C X3
N3147	R	N3448	G1R1R4V2	N3898	B	N4267	B	N4555	S4
N3151	D	N3454	E1	N3900	B	N4270	B	N4556	S4
N3152	D	N3455	E1	N3904	B	N4272	S4	N4559	C R1R2
N3158	H	N3470	K7	N3905	R1T4	N4273	B	N4564	G1
N3159	C	N3471	K3U2Z1	N3913	K3	N4274	B R4	N4565	A B C
N3161	C	N3486	R R2	N3917	R1	N4275	S4	N4566	S4
N3162	R	N3489	B F1	N3921	F Z1Z2	N4278	B E1X3	N4567	C E1R4
N3163	C	N3495	G1	N3923	R	N4281	B	N4568	C E1

APPENDIX V. SOURCES OF OPTICAL AND RADIO VELOCITIES.

N4569	L201R4U3	N4808	G1R1	N5128	R1R3P5S1	N5643	L3N2	N6158	SS
N4570	H	N4809	E1	N5140	L3	N5653	C	N6160	K654
N4578	B	N4810	B	N5141	K3M3	N5665	G1K2	N6166	K
N4579	R R4	N4816	S5	N5144	Z1	N5665A	K2	N6173	S4
N4589	R	N4819	C	N5161	L3	N5668	C R1R4T2	N6181	R FIR2
N4593	G1	N4821	C	N5173	B	N5676	C R2	N6195	T4
N4594	A B C D	N4826	R F2R2R4	N5188	L3	N5678	C	N6207	R R2
N4603D	N2	N4827	C	N5193	L3	N5682	G1K2	N6215	M
N4605	C Q2	N4835	L3N1	N5193A	L3	N5683	K2Z2	N6217	B C R1R1R2R4
N4616	N2	N4837	K3	N5194	B D E101P2P5	N5687	B	N6221	M
N4618	C G1	N4839	C	N5194	R1R3R3R4U3V2	N5689	R	N6239	C R2
N4621	R	N4840	S4S5	N5195	B D E101	N5713	B C R1R1R2T2	N6240	L1
N4622	N2	N4841	S5	N5204	C R1R2	N5746	B C D	N6275	Z1Z2
N4622A	N2	N4842	C	N5223	K2	N5774	E1R2	N6300	M1
N4622B	N2	N4848	C	N5227	R1T4	N5775	E1	N6306	GIU4
N4631	G J1P2R1R2R3	N4849	C X4	N5236	A R G1N2R R2	N5787	K3	N6307	GIU4
N4632	G1	N4850	R	N5236	R2R4R5	N5792	G1	N6340	R
N4636	R C F1	N4853	B	N5247	R2	N5806	B	N6359	B
N4639	T2	N4854	S5	N5248	R C F R2R4	N5812	B	N6372	R1T4
N4643	C	N4856	H	N5253	B I V N2P4R2	N5813	B C	N6379	R1T4
N4644	S7	N4858	C	N5253	R454V3	N5820	B	N6384	B C D R2
N4644A	S7	N4859	S5	N5256	S6Z1	N5831	B	N6412	C
N4645	L3	N4860	R C	N5257	E1	N5829	R1T4	N6438	L252
N4646	S7	N4861	C F J3R2U3	N5258	E1	N5832	01	N6438A	L252
N4647	C	N4864	R	N5260	T4	N5838	B	N6454	M3
N4649	A B C D	N4865	B	N5264	R6	N5846	B C	N6478	B
N4650	N2	N4866	B	N5273	B	N5846A	B C	N6482	B
N4650A	N2	N4867	B	N5278	E1Z1	N5850	B C	N6503	C D FIR1R1R2
N4650B	N2	N4869	R	N5279	E1Z1	N5854	B	N6560	R1T4
N4651	G101R1R4	N4871	S5	N5283	U4Z1	N5857	B C	N6574	R C O3
N4654	G1R1R1R4T2	N4872	B S5	N5291	L3	N5859	B	N6621	F
N4656	C J J1R R1R2	N4874	R K3S5	N5292	L3	N5860	Z1	N6627	B
N4660	R2	N4875	X4	N5293	R1T4	N5861	R2	N6635	C
N4660	H	N4876	S5	N5302	L3	N5866	A B C S4V2V4	N6643	B C R1R2
N4662	R1T4	N4881	B	N5302	L3	N5866	G1	N6654	C
N4665	R	N4883	S5	N5304	L3	N5874	R1	N6658	B
N4666	C	N4886	B	N5308	B C	N5878	B	N6661	R C
N4669	S7	N4889	B C X4	N5322	B	N5879	B R2	N6674	R
N4670	C 01S4S5	N4892	S5	N5328	L3	N5898	B L3	N6684	M
N4673	C	N4894	X4	N5330	L3	N5899	B	N6691	R1T4
N4675	S4	N4895	B	N5335	B E1	N5903	B L3	N6699	T3
N4676A	F S4S9	N4896A	C	N5357	L3	N5905	02	N6702	R C
N4676B	F S9	N4896	R	N5360	K254	N5907	B C R2	N6703	R C
N4677	L3	N4898	R X4X4	N5363	B C	N5915	G1	N6707	L3
N4683	L3	N4900	C	N5364	B	N5920	K706	N6708	L3
N4686	S7	N4902	C	N5371	B C	N5921	B R2	N6710	R
N4687	Z2	N4906	X4	N5377	B	N5923	R1T4	N6711	R1T4
N4688	K1R1	N4907	C	N5343	F R9Z1	N5929	E1	N6744	M
N4691	G1S4	N4908	B	N5394	B K2	N5930	E1	N6753	L3M M1
N4692	C	N4911	C	N5408	M2V3	N5949	C	N6754	L3
N4695	S7	N4915	B	N5419	L1L3S2	N5954	E1	N6769	L3
N4696	L L3S2	N4919	S5	N5426	E1	N5962	B	N6770	I L3
N4697	B	N4922	C	N5427	E1R1	N5970	B C R2	N6771	I L3
N4698	B R4	N4923	S5	N5444	U2X3	N5982	B C	N6776	L3
N4699	C R5	N4926A	C	N5448	B	N5985	B	N6780	L3
N4704	R1T4	N4926	C S5	N5457	B P1R R2R3R3	N5992	Z1Z3	N6782	L3
N4706	L L3	N4927	S5	N5468	R3R4R4	N6007	R1T4	N6806	T4
N4707	R6	N4929	S4	N5468	C R1	N6015	B C R1R1R2	N6810	M
N4709	L L3	N4931	S5	N5473	B C	N6018	S6	N6814	B
N4710	G1S5	N4936	L3	N5474	C K7R1R2	N6021	S6	N6822	B C D R3
N4712	S4S4	N4939	G103	N5477	K7	N6022	S6	N6824	R
N4713	C	N4941	R R2	N5480	E1	N6023	S6	N6835	G1K3R2
N4715	SS	N4944	C	N5481	E1	N6027	H C K3S4	N6851	L3T3
N4719	Z2	N4945	S2	N5483	L3	N6027A	K3S4	N6861	L3
N4725	R S4	N4948A	R6	N5485	B	N6027B	B C K3S4	N6861D	L3
N4728	C	N4951	R1	N5486	K7R1	N6027C	K3S4	N6868	L M
N4731	D R1	N4952	C	N5493	B	N6028	K1U4	N6870	L3
N4735	S4	N4957	S5	N5496	R2	N6032	U4	N6872	L1L3
N4736	A B C F J1K4	N4961	C R1	N5506	E1	N6035	U4	N6875	I
N4736	04R3	N4966	S5	N5507	E1	N6040A	S4	N6876	L1L3
N4738	S5	N4971	S5	N5523	R1	N6040R	S4	N6877	L3
N4742	B	N4976	L M	N5530	M1	N6041	B F	N6878	I3T4
N4743	L3	N4995	C	N5532	K7	N6044	B	N6880	L3
N4744	L3	N5000	S4S5	N5533	B	N6045	B F	N6890	L3
N4745	SS	N5004	S5	N5544	E1	N6047	R	N6893	L3
N4747	R1S4	N5004A	S5	N5545	E1	N6050	F	N6902	L3
N4750	C	N5005	S5	N5548	B J1	N6051	K3	N6902R	T4
N4753	C S4	N5008	R C F R4	N5556	R6	N6052	G1K3S7U4V2	N6909	L3
N4754	B	N5014	Z1Z2	N5557	B	N6055	F K	N6912	R1T4
N4760	L1	N5018	R	N5566	B D	N6056	F	N6921	R
N4762	R C D	N5033	B C D R1T2	N5574	B	N6060	U4	N6925	M M1
N4767	L3	N5049	B	N5576	B	N6061	F	N6927	R
N4774	U9	N5055	A B C F R3	N5584	R1	N6068	E1	N6927A	B
N4775	C	N5061	C	N5585	C R1R2	N6068A	E1	N6928	B
N4781	C	N5068	C	N5596	Z1	N6070	B C R1R2	N6930	B
N4782	K E1S6	N5077	H F1X3	N5607	Z1	N6086	K6	N6944	R C
N4783	K E1S6	N5087	B	N5614	B	N6090	K3Z1Z2	N6946	R R1R3R3R4
N4789	C	N5098A	U6	N5618	R1	N6106	G1	N6951	C R2
N4789A	R2R6	N5102	M G1R2	N5631	B	N6109	U6	N6954	B
N4793	C	N5112	R1	N5633	B C	N6118	R1	N6958	M
N4798	R	N5127	U2	N5638	B	N6120	K1K3S4	N6962	R
N4800	B	N5128	B F I N2N2P4	N5638	B	N6137	U6	N6963	R
N4807	SS							N6964	a
N4807A	SS								

APPENDIX V. SOURCES OF OPTICAL AND RADIO VELOCITIES.

N6970	M1N2	N7531	M1	10235	Z1	12458	E1K3U2	A0001+14	R6
N6972	G1	N7532	Z3	10239	R1	12476	U2	A001+21	Z1
N6978	G1	N7537	G1	10277	Z3	12524	Z1Z2	A003+41	N2
N7013	G1R2	N7541	B	10292	S4	12554	N3	A003+19	Z1
N7014	L3	N7547	S4	10298	K3	12565	K3	A0016+19	R2
N7029	L3M	N7549	S4	10302	R1	12565A	K3	A0017+10	P6
N7038	L3	N7550	S4	10309	S4	12574	C R R3R3R4R6	A0021+14	Z1
N7041	L3M	N7552	L M1N2	10310	K2S4	12580	T4	A0022+14	Z1
N7049	L3M	N7562	C	10312	S4	12738	K6	A0022+29A	K8
N7052	U2	N7564	K3	10313	S4	12943	Z2	A0022+29B	K8
N7079	M1M1	N7576	B D	10342	B C R R3T2	12987	K3	A0024+39	K3
N7080	R1T4	N7578A	S4	10356	R1R4	13244	T2	A0025+30A	K3
N7083	L3	N7578B	S4	10387	R1T4	13256	B	A0025+30B	K3Z1
N7090	M	N7580	K3Z1	10391	C	13258	O1	A0026+02	B
N7125	L3	N7582	L N2	10399	Z1	13268	S4	A0028+10	U4
N7135	L2	N7585	B C	10450	J2U3	13290	L3	A0028+08	Z3
N7137	C	N7590	L M N2	10509	R1T4	13370	L3	A0031+30	K8
N7144	M	N7592	D	10563	E1	13453	T2	A0031+31	R6
N7145	L3M1	N7597	S4	10564	E1	13481	B	A0033+10	K8
N7155	L3	N7599	L3N2	10691	U2U4Z1	13481A	B	A0034+25	112
N7156	G1	N7600	A	10694	G1K3	13483	B	A0035+14	K3Z1
N7168	L3M1	N7602	S4	10701	K2	13522	R6	A0037+24	Z1
N7171	B	N7603	K2Z3	10712	K6	13576	R1R2R6	A0038+01	X2
N7172	G1S3	N7606	B S6	10818	S5	13582	S4	A0039+40	R8
N7173	G1	N7610	R1T4	10821	R1S5T4	13585	S4	A0042+27	Z1
N7174	G1S3	N7611	B	10832	S4	13599	X4	A0043+11	R6
N7176	G1	N7617	B	10835	X4	13600	X4	A0044+50	R1T4
N7177	B R2	N7619	B	10853	R1	13617	R6	A0045+20A	F
N7196	L3M	N7620	Z1	10875	K3	13618	X4	A0045+20B	F
N7200	L3	N7623	A	10883	K301	13620	X4	A0046+12	D S7U4
N7204	S3	N7624	Z1	10900	R1T4	13623	X4	A0046+02	Z2
N7205	M	N7625	B C O3R1R2	10954	J3	13645	X4	A0047+21	R2R6
N7213	L M	N7626	B X3	11065	K7Z1	13651	X4	A0050+21	K3Z1
N7217	H T2	N7634	Q2	11076	Z2	13687	R2R6	A0051+73	*
N7218	C R1R2	N7640	C G1R1R2R3R3	11090	K3	13723	Z1Z2	A0054+23	Z1
N7232	L1L3	N7640	R4	11143	X3	13730	S7	A0054+43	R1T4
N7233	L3	N7648	Z3	11155	S6	13900	B	A0055+36	R1T4
N7236	K S6	N7649	B	11158	R1T4	13946	B	A0055+48	R1T4
N7237	K S6	N7671	C	11165A	S6	13947	X4	A0057+31	Z1
N7240	A	N7673	J3K3R2Z1	11165B	S6	13949	C	A0058+07	R6
N7242	A	N7674	Z3	11173	F	13955	X4	A0059+30	K1
N7244	Z1	N7677	J3R2	11178	F	13959	X4	A0102+06	D
N7252	B	N7678	B R2	11181	F	13960	X4	A0106+01	O1
N7263	S4	N7679	B C F1	11182	F S6U4	13963	X4	A0107+49	R6
N7274	K6	N7702	M	11183	B	13973	S5	A0109+01	Z2
N7280	G1	N7713	G1	11185	B	13976	S5	A0111+07	Z2
N7292	K8	N7714	C O3R1	11186	F	13990	S5	A0111+42	R1T4
N7298	R1T4	N7715	C	11189	Z1	13998	S5	A0112+32	T4
N7302	B	N7716	B	11194	B	14011	X4	A0113+32	T4
N7309	G1	N7720	K6K6S6	11222	R1T4	14012	X4	A0115+11	K7
N7314	B R2	N7721	G1	11236	R1T4	14021	B	A0116+04A	Z2
N7316	K3Z1	N7723	C	11267	R1T4	14026	X4	A0116+04B	Z3
N7317	B	N7727	B C	11269	R1T4	14040	C S4	A0117+07	K7
N7318A	B C F	N7731	K1	11301	R1T4	14041	X4	A0118+12	R6
N7318B	B C	N7741	B G1R1R1	11302	B	14042	S5	A0119+26A	K3
N7319	B R1R2	N7742	B C	11317	C	14045	B	A0119+26B	K3Z1
N7320	F R1R2R2	N7743	B	11347	L1	14051	B	A0120+01	Z3
N7320C	S6	N7750	K7	11401	R1T4	14182	K1	A0120+34	K1K3
N7331	B C D F2R1R2	N7752	D K2	11459	L M	14219	T4	A0123+31	K3Z1
N7332	B T1V1	N7753	D K5	11460	B	14296	G1L3M	A0124+18	Z1
N7335	B	N7755	G1M1	11461	K3Z1	14299	L3	A0132+04	R6
N7339	G1	N7757	K7	11515	K7	14329	L3	A0135+07	K7
N7343	B	N7764	N2	11516	K7	14329A	L1L3	A0137+15	R6
N7361	G1R2	N7768	K6	11558	R6	14351	M1	A0141+02	Z3
N7371	G1	N7769	C	11565	K6	14366	T4	A0141+11	Z3
N7377	A	N7770	C	11574	R6	14562	K1	A0141+16	K3Z1
N7385	A	N7771	C D	11586	K3Z1	14562A	K1K3	A0142+16	S6Z1
N7386	B M2	N7780	K7	11613	B R	14566	T4	A0145+16	R1T4
N7392	C	N7782	K7	11637	T4	14662	M N2R5T3	A0145+12	R6R1
N7393	C	N7785	B	11639	Z3	14796	L3	A0145+12	K7
N7410	L	N7793	B C R2R5	11696	K1	14797	L3M	A0146+27	S7
N7412	L3	N7796	M	11703	K1	14827	L3	A0146+05	Z3
N7413	K7O1	N7798	Z1	11706	K7	14831	L3	A0147+27	S7
N7418	R2	N7814	B	11727	B	14837	L3	A0151+36	13Z2
N7424	L3	N7816	K7	11743	K7	14842	L3	A0152+06	K7
N7428	K7	N7819	R1T4	11746	O1	14845	L3	A0154+27	Z1
N7440	R1T4	N7828	L2	11830	D R2S7	14852	T4	A0155+02	Z3
N7448	R2R2	N7829	L2	11854	Z1	14889	L3	A0156+08	R1T4
N7455	Z3	N7836	Z1	11876	R2S7	14960	L3	A0158+08	K7
N7457	B	10010	B R R2R3R3R4	11913	S8	14967	L3	A0200+02	Z2
N7460	K7	10043	R1T4	11953	L3S8	14970	L3	A0200+18	R1T4
N7463	G1	10049	R1T4	11970	S8	15052	N2	A0200+21	R6
N7464	G1	10056	U4	12006	S8	15063	L1	A0201+28	Z1
N7465	G1K3Z1	10056A	U4	12056	L3	15101	T4	A0206+35	K3M3
N7468	K3J3H2Z1	10079	C	12075	R1T4	15135	G1L2	A0208+05	Z3
N7469	B F O5U1	10080A	B	12082	L1	15152	I M	A0208+06	R6
N7479	B C F R2	10080B	B	12184	J3J3R2S7U3	15181	L3	A0208+13	Z1
N7495	R1T4	10089	Z3	12209	U3	15201	L3	A0209+37	U2
N7496	L	10115	M2	12226	T4	15240	M1	A0211+03	S6U9
N7499	B	10119	K1	12338	R1S5	15243	K3	A0217+00	Z3
N7501	A	10120	K1	12339	S5	15267	L	A0220+41A	K2K3
N7503	A	10173	K7T4	12341	S4	15269	L3	A0220+42	K2K6
N7507	A	10198	K7	12378	K6	15283	F	A0221+35	R2R6
N7518	Z3	10211	K7R1T4	12389	C	15285	K3	A0222+36	U2
N7525	Z1	10223	K2	12421	R1T4	15338	K3	A0223+21	R6

APPENDIX V. SOURCES OF OPTICAL AND RADIO VELOCITIES.

A0223-10 R6	A0636-53 U9	A0915-45 T4	A1033-27 L3	A1148-56 R6
A0224-22 K3	A0637-53 U9	A0915-71 K3Z1Z2	A1033-24 R6	A1149-46 K1
A0228-01 K7	A0644-74. S3	A0917-12 R6	A1033-31 R6	A1149-52 R6
A0229-38 R6	A0648-26 U9	A0917-71 K3Z1Z2	A1034-27A L3	A1151-46 U3
A0230-33 R6	A0648-27 U2	A0918-12 R6	A1034-27B L3	A1150-70 Z1
A0230-40 R6	A0650-50 Z1	A0919-22 R6	A1035-64 U2	A1152-06 T4
A0231-29 R2R6	A0650-80 R1T4	A0919-47 K3Z2	A1035-44 K3U2Z1	A1152-51 Z1
A0232-37 K8	A0700-56 R6	A0921-17 Z1	A1039-23 R6	A1152-57 U2Z1
A0232-59 K3	A0702-67 Z1	A0922-24 T4	A1039-34 R6	A1153-31 R6
A0233-23 R1T4	A0705-71 F1G1R2	A0923-19 Z1	A1039-48 K3Z1	A1155-51 R6
A0234-20 S6Z1	A0708-73. K255	A0923-35 Z1	A1040-20 Z1Z2	A1155-22 R6
A0234-34 B	A0713-63 K3	A0923-68 K3Z1	A1041-60 R6	A1155-38 R6
A0235-29 R1T4	A0718-34 S2	A0926-56 K3Z2	A1045-26 R1T4	A1200-39 K3
A0236-18A K	A0722-30 U2	A0927-49 K3Z1	A1045-50 K3Z2	A1200-41 R1T4
A0237-34 B K9	A0722-72 J3K3R2Z2	A0930-55A K1P2Z1	A1046-23 Z2	A1200-64 K3U2U4
A0237-01 R6	A0724-40 R6	A0930-55B K1	A1046-26 R2S7	A1201-01 R6
A0238-15 R1T4	A0727-63 K3Z1	A0931-11 U9	A1046-52. Z1	A1201-60 K3
A0238-59 K3R2R3R3R4	A0728-55 K3Z1Z2	A0932-30 Z1Z2	A1046-65 R6	A1202-27 R6
A0243-15. Z3	A0728-60 J3	A0934-48 K3	A1047-01 R1T4	A1203-31A K
A0245-02 Z2	A0732-58 U3	A0936-04A F S5	A1047-19 R6	A1203-31B K
A0245-03 R6	A0734-42 R1T4	A0936-04B F S5	A1048-44 Z1	A1204-17 K
A0246-00 K1	A0736-48 R1T4	A0936-04C F S5	A1049-59 K7	A1204-40 R6
A0246-01 R6	A0738-40 R6	A0936-04D F S5	A1050-50 U2Z1	A1205-67 K3Z1
A0246-18 U9	A0737-65 K3U2Z1	A0936-04E K255	A1052-49 U2Z1	A1206-47 K3U2Z1
A0248-04 Z2	A0738-49 K3U2U4Z1	A0936-32A S556	A1055-24 Z2	A1207-17 K1
A0249-01 R6	A0739-16 R6	A0936-32B S556	A1055-72 Z1	A1207-42 K3
A0253-27 T4	A0739-70 R1T4	A0936-71 R4R6	A1059-45 K3R2Z1	A1208-48 Z1
A0254-02 Z3	A0742-62 K3Z1	A0937-21 Z1Z2	A1101-41. B 01	A1208-02 R6
A0255-05. K6K656	A0743-59 R1T4	A0939-76 K3Z1Z2	A1102-29 S6U3Z2	A1208-40 Z3
A0255-41 K3	A0743-61 U3	A0940-05 G1	A1102-45 U2Z1	A1208-50 R6
A0300-16 K701	A0743-74 K3	A0940-66 Z1	A1103-20 R6	A1208-70 K3
A0305-31 T4	A0744-28 R1T4	A0941-29 Z1Z2	A1103-48 Z1	A1209-29 S4
A0312-04 R6	A0744-74 J3K3R2Z2	A0942-31 R6	A1103-57 K7	A1209-40 Z1Z2
A0313-03 Z3	A0745-56A U7	A0943-46 K3	A1104-18A K	A1212-06 0
A0313-31 R1T4	A0746-34 U9	A0943-56 K3Z1Z2	A1104-18B K	A1212-13 R6
A0317-03 Z2	A0747-30 R1T4	A0944-39 Z1Z2	A1107-24A E1	A1212-36A R6
A0322-06 Z3	A0751-55 K3Z1	A0944-58 K3Z2	A1107-24B E1	A1212-36B R2
A0323-06 Z3	A0752-39 Z1	A0945-33 Z1Z2	A1107-28A S6	A1213-34 T4
A0323-00 Z3	A0754-58 R2R6	A0946-07 R1T4	A1107-28B S6	A1213-11 R6
A0325-17 R2S7	A0756-16 R1T4	A0946-55 U3	A1108-09 T4R1	A1213-40 K3
A0325-02 K6	A0800-25 Z1	A0947-31 K3R6	A1109-51 Z1	A1213-41 K3
A0326-39 U2	A0804-04 U9	A0947-34 K3	A1110-53 R6	A1214-11 R6
A0327-04 R1T4	A0804-39 Z2	A0947-46 U2Z1Z2	A1111-56 K7	A1214-29 R6
A0328-03 Z3	A0805-72 U3	A0949-01 R6	A1111-57 K7	A1214-58 K3
A0331-39 U2U7	A0807-46 R6	A0949-43 K7	A1113-33 T4	A1215-44 Z1
A0340-39 K6	A0811-58 K6	A0950-37 Z1Z2	A1113-29A K6	A1215-58. Z1
A0356-10 R6	A0813-70 C R R2R3R4R6	A0952-08 B	A1113-29B K3Z2	A1216-04. 0 S7
A0410-29 K3	A0815-20 S5	A0953-29 R6	A1115-01 R1T4	A1216-14 T2
A0422-00 Z2	A0816-21 X4	A0953-46 K3Z1Z2	A1115-28 K3	A1217-12 T2
A0423-69 U5	A0817-21 K8	A0953-60A Z1	A1115-63 U2	A1218-46 R6
A0423-70 R1T4	A0819-74 R6	A0953-60B J3U3	A1116-02 01	A1219-41 R1T4
A0429-01 R1T4	A0821-25 Z2	A0955-32 Z1Z2	A1116-51 K2	A1220-02 K3
A0430-05 K2K3K301	A0823-21 K8	A0956-30 R6	A1116-62 K3	A1220-12 T2
A0432-01 K3	A0824-55 K1K3K3U9Z1	A0957-05 R6	A1117-02 T4	A1220-22 Z1Z2
A0434-10 Z2	A0825-42 R6	A0958-14 R1T4	A1117-02 R6	A1221-04 U3
A0435-11 K3	A0825-52 K3R2Z1	A0959-43 Z1Z2	A1122-13 R1T4	A1221-67 Z1
A0437-04 R	A0826-52 K3Z1Z2	A1000-59 U3	A1122-23 T4	A1222-70 R6
A0441-74 R6	A0827-52 T4R1	A1001-13 K7	A1122-54 K301U3	A1223-15 T2
A0446-00 R6	A0828-52 K3Z1Z2	A1001-14 K7	A1122-64 R1T4	A1223-48 S7Z1
A0447-29 R6	A0828-75 K3Z2	A1003-29 S7	A1123-35 L1M2S2	A1224-48 K8
A0447-03 K3S6	A0829-19A K2	A1003-77 Z2	A1123-64 K3Z1	A1223-58 R6
A0449-17 L1	A0829-19B K2	A1006-30 R6	A1124-35 Z1Z2	A1224-37 R6
A0450-25 R6	A0832-30 Z1	A1008-25 R6	A1124-79 J3	A1225-43 R6
A0453-20 L1S2	A0832-46 K3	A1008-04 B C R R2R3R6	A1125-36 T4	A1225-44. Z1
A0456-05 T4R1	A0832-66 K3Z2	A1008-58 K3Z2	A1126-22 Z2	A1226-11 T2
A0458-65 J3	A0836-51A K2	A1008-59 Z2	A1127-22 R1T4	A1226-02 R6
A0459-03. K3	A0835-02 U9	A1009-58 K3Z2	A1127-24 K3	A1226-37 R6
A0500-16 R6	A0842-37 Z2	A1009-67 Z1	A1127-37 Z1Z2	A1226-43 R6
A0504-17 T4R1	A0843-36 Z2	A1012-21 K3	A1127-48 Z1	A1228-12 T2
A0505-16 R6	A0843-49 B2	A1012-44 K3Z2	A1129-53D F K3Z1	A1229-29 R6
A0507-00 K1	A0844-70 Z1	A1012-55 K7	A1129-62 K3	A1229-66C Z1
A0508-31 R6	A0845-46 K3	A1013-45 K3U2Z1	A1129-71A K3	A1230-09 B
A0508-02 J3K3	A0846-65 K3Z1Z2	A1014-15 Z2	A1129-71C F K3	A1230-31 R6
A0510-33 R6	A0846-72 K3Z1	A1014-60 Z2	A1129-71D K3	A1230-46 U4Z1
A0513-06 K6	A0847-29 U9Z2	A1015-64 U4Z1	A1129-71E F K3	A1230-52 Z1Z2
A0515-00 K1	A0847-57 U3	A1018-37 T4	A1130-49 K3R2U2	A1232-06 R6
A0516-21 R6	A0847-61 Z1	A1018-46 R1T4	A1130-55 Z1	A1232-48 K1
A0518-45 R6	A0847-73 K3Z2	A1020-18 Z2	A1133-16 Z2	A1233-81 K1
A0521-76 R1T4	A0854-66 K3	A1020-71 R6	A1133-20 K3	A1234-72 M2
A0524-69 *	A0855-06 K1	A1021-15 R2R6	A1134-20A K3Z1	A1235-35 T4
A0524-16 R1T4	A0858-60 K3Z2	A1022-55 K7	A1135-07 R1	A1236-56 Z1
A0527-73 R6	A0901-51 K3R2Z2	A1023-44 K3Z2	A1137-28 S7	A1237-09 R1T4
A0548-31 L1	A0905-06 R6	A1023-56 K3Z2	A1138-35 Z1Z2	A1238-28A S7X4
A0549-75 R6	A0907-22 R6	A1023-62 Z1Z2	A1140-36 Z1Z2	A1238-28B S7
A0551-78 R1T4	A0908-14 R6	A1024-20 K3	A1140-59 R6	A1241-05 R6
A0553-03 K3R2R3S6	A0908-46 K3Z2	A1025-19 K3	A1142-59 J3	A1241-00 R6
A0558-28 R6	A0909-35 R6	A1025-40 Z1Z2	A1143-35 Z1Z2	A1241-55A J3S7
A0600-07 K1K3	A0910-17 U9	A1026-70A R6	A1143-71 Z1	A1241-55B J3S7Z2
A0609-71B R1T4U3Z2	A0910-35 U6	A1027-35A L3	A1144-03A B	A1242-20 T4
A0613-26 R6	A0911-16 R1T4	A1027-35B L3	A1144-03B B	A1242-28 K3S7X4
A0618-37 L1S2	A0911-47 K3	A1027-16 Z2	A1144-03C B	A1242-34 R6
A0618-16 R1T4	A0911-67 K3Z2	A1029-54 R2S7U3	A1146-24 R6	A1242-56 S4
A0621-74 U3	A0912-59 U3	A1032-44 Z1	A1146-24 R6	A1243-05 R6
A0625-74 R1T4	A0913-53 K3Z1	A1032-46 K3Z1	A1148-43 U5	A1243-47 Z1
A0635-75 R2U3	A0915-11 B	A1032-63 K3Z1Z2	A1148-39 R6	A1243-71 Z1

APPENDIX V. SOURCES OF OPTICAL AND RADIO VELOCITIES.

A1244+26 C S4	A1320+51 Z1	A1427+34 T4	A1647+488 Z1Z2	A2158+10. Z3
A1244+36 R6	A1320+53 Z1Z2	A1427+44 R6	A1648+45A K	A2206+40 R1T4
A1244+48 Z1	A1321+24 R6	A1428+27 R2S7	A1648+45B B K	A2207+46 L3
A1244+51 S7	A1322+36 Z1Z2	A1433+59 R6	A1648+45C K	A2207+19 R6
A1245+47 Z1	A1323+21 R6	A1433+57 R6	A1648+53A K3	A2207+17 K3S6
A1245+27A C	A1323+57 U3	A1436+08 R6	A1648+53B K	A2209+00 T4
A1245+27B C	A1323+58 R6	A1437+37 Z2	A1648+53C K3	A2209+46 T4
A1245+72 Z1	A1324+20 R1T4	A1439+53 K1Z1	A1648+53D K3	A2213+22 S4
A1246+41B L3	A1324+26 Z1Z2	A1442+08 R6	A1648+53E K3	A2214+21 R6
A1246+41C L3	A1324+32 R1T4	A1443+08A F	A1648+53F K3	A2218+47 R1T4
A1246+34 R2S7Z2	A1326+31 U7	A1446+09 F R1R6	A1652+39 U6U8	A2220+30A S4
A1246+54 S4	A1326+44 Z1	A1448+35 K1K305R2	A1653+53 R6	A2220+30B S4
A1247+41 L3	A1326+53 Z1Z2	A1449+35 K1K3R2	A1656+38 K1	A2222+38. S4
A1247+10 R6	A1327+45 R2R6	A1450+74 Z1	A1659+29 Z1Z2	A2228+00 O4
A1247+27 C	A1328+31 Z2	A1452+42 K3	A1704+34 K3	A2228+33 Z1
A1248+40 L3	A1329+75A Z1	A1455+06 R1T4	A1716+48 K1K3	A2229+19 K3Z1
A1248+28 S4S5X4	A1329+75B Z1	A1456+53 K3	A1717+00 K6	A2229+39 K7
A1249+41 L3	A1329+75C K2	A1459+52 R6	A1717+14 R6	A2231+32 R2R6
A1250+06 R6	A1331+69 Z1	A1514+07 K6K6	A1718+49A K	A2233+03 R6
	A1332+45 N2	A1514+43 K1	A1718+49B K	A2236+05 R6
A1250+40 T4	A1332+33 L3	A1515+23 L3	A1720+30 Z1	A2236+35 K6U2
A1251+11 R6	A1332+34A K2	A1516+42. F K3	A1724+45 K1	A2237+11 R1T4
A1253+27 K3	A1332+34B K2	A1517+36 T4	A1739+47 K1K3	A2237+34 K8
A1254+32. B C	A1332+34C K2Z2	A1522+58 R1T4	A1749+56A K1K3	A2237+37 R1T4
A1254+57 S7Z1	A1333+29 R2S7	A1523+16 R1T4	A1749+56B K1K3	A2239+19 K3Z1
A1255+02 R6	A1333+46 R6	A1526+55 Z1Z2	A1755+32 R1T4	A2240+31 K2
A1255+03 R6	A1334+07 R6	A1530+51 Z1Z2	A1805+65 U4	A2240+29 U2
A1255+24 Z1Z2	A1334+46 R6	A1531+46 K3	A1824+34 K1K3	A2242+37 R1T4
A1255+27A K3	A1335+33 L3	A1534+38. K3	A1827+48 K3	A2251+31 K1
A1255+27B U5	A1335+09 R6	A1534+58 U4	A1829+41 T4	A2251+32 S4
A1255+28 K8	A1337+40 R6	A1535+44 R6	A1830+55 K3	A2252+32 S4
A1255+59 Z2	A1337+43 Z1	A1535+54 S6Z1Z2	A1831+54 K1K3	A2255+04A S4
A1256+14 S6R6	A1338+54 R1T4	A1535+55 K3Z2	A2024+02 T4	A2255+04B S4
A1256+27A K3S4	A1339+30 U3	A1539+00 R6	A1836+17 S6	A2255+02 K7R1T4
A1256+27B K3S4S5	A1340+39 R6	A1544+46 Z1Z1	A1852+54 L3	A2257+16 Z3
A1256+27C S5	A1342+27 K3	A1547+81 U6	A1855+37 Uo	A2257+25 U2
A1256+59 Z2	A1342+37 K1	A1548+16 R6	A1903+61 L3	A2257+26 K3
A1257+28 K4K3	A1342+56 U4Z1	A1552+19 K3U2	A1906+42 R1T4	A2258+09 Z3
A1257+33 Z1	A1344+34A E1	A1553+19 Z1	A1922+63 U5	A2258+16 Z1
A1258+15 R6	A1344+34B E1	A1554+42 K305	A1930+54 R1T4	A2300+32 T4
A1258+64 Z1	A1345+30 L3	A1555+30 R1T4	A1940+50 O1	A2301+22 K3Z1
A1259+48 Z1	A1345+34 Z1Z2	A1556+26 Z1	A1951+57 R1T4	A2310+10 Z3
A1300+17 R6	A1346+31 Z1	A1557+35 Z3	A1954+40 C	A2311+23 Z1
A1301+03 C	A1348+38 R2R6	A1558+30 Z2	A1955+40 C	A2312+07 K8
A1302+07 R6	A1349+40 Z2	A1559+18 K3R2Z1	A1957+47A S3	A2316+24 K3
A1302+30 K3Z2	A1350+64 Z1	A1600+16A K3S6	A1957+47B S3	A2317+25 Z1
A1303+17 R6	A1351+69 U4	A1600+16B K3S6	A2004+29 T4	A2320+32 U2
A1303+33 Z1	A1352+54 R6C	A1600+16C K3K6S6	A2009+05 T4	A2324+11 Z3
A1303+53 Z1	A1353+18 R6	A1601+19 Z1	A2011+45 L3	A2324+17 K3Z1
A1304+28 K1	A1355+29A Z2	A1602+34 U6	A2015+39 T4	A2325+24 S6
A1304+67 R6	A1355+29B Z2	A1607+41 K3	A2020+44 L3	A2326+14 R6
A1308+03 K	A1358+11 L1	A1610+60 S2	A2022+05 R1T4	A2327+25 K3
A1308+60 Z1	A1359+37 Z1Z2	A1614+67 R6	A2024+02 T4	A2327+40 R6
A1309+21 O3	A1401+69 Z1	A1615+52 Z1Z2	A2029+02 R1T4	A2329+25 Z3
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A1309+84 J3	A1404+69 K3	A1621+39 K3	A2044+13 R6	A2332+17 R6
A1310+36 R6	A1407+01 U7	A1622+41 K101	A2058+28 L1M2	A2334+00 R6
A1310+50 Z1	A1407+71 Z1	A1622+54 K3	A2058+15 B	A2335+29 S6Z1
A1310+67 Z1	A1409+65 L2	A1623+41 K3	A2058+16 B	A2335+30 U2
A1311+35 K3	A1409+52 B	A1625+20 U5	A2059+15 B	A2338+02 K1
A1311+46 R6	A1413+16 R6	A1625+40 K1	A2100+48 L3	A2339+03A B S9
A1312+35 Z2	A1413+23 R6	A1625+41 K3	A2101+21 T4	A2339+03B B S9
A1312+46 R2R6	A1416+26 T4	A1626+38 K3	A2101+48 L3	A2340+19 K3Z1
A1312+55 U4Z1	A1420+33 Z1	A1627+17 U5	A2102+47 L3	A2342+06 K7
A1313+25 R6	A1420+45 R6	A1627+40 K1	A2103+47 L3	A2346+05 K7
A1313+47 R6	A1420+46 K1K3	A1631+35 K3	A2105+03 K3	A2346+25 R6
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A1316+42 R6	A1425+13A U5	A1636+42A K2	A2131+08 K1	A2354+02 Z3
A1317+52 Z1Z2	A1425+13B U5	A1636+42B K2	A2148+25 R1T4	A2359+15 B R3R6
A1318+10 R6	A1426+27 S7	A1639+58 R1T4	A2152+69 L1	A2359+23A F1
A1318+56 Z1	A1426+36 Z1Z2	A1647+48A K3U9Z1Z2	A2153+07 Z3	A2359+23B F1

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